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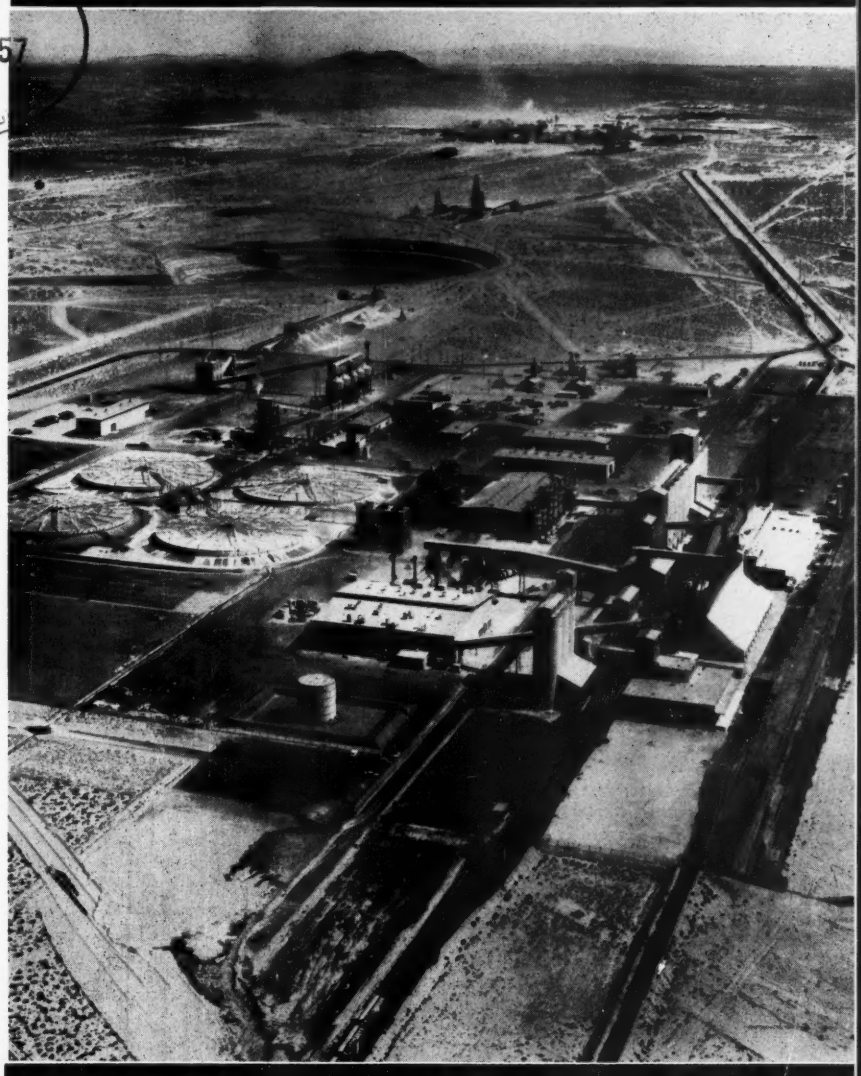

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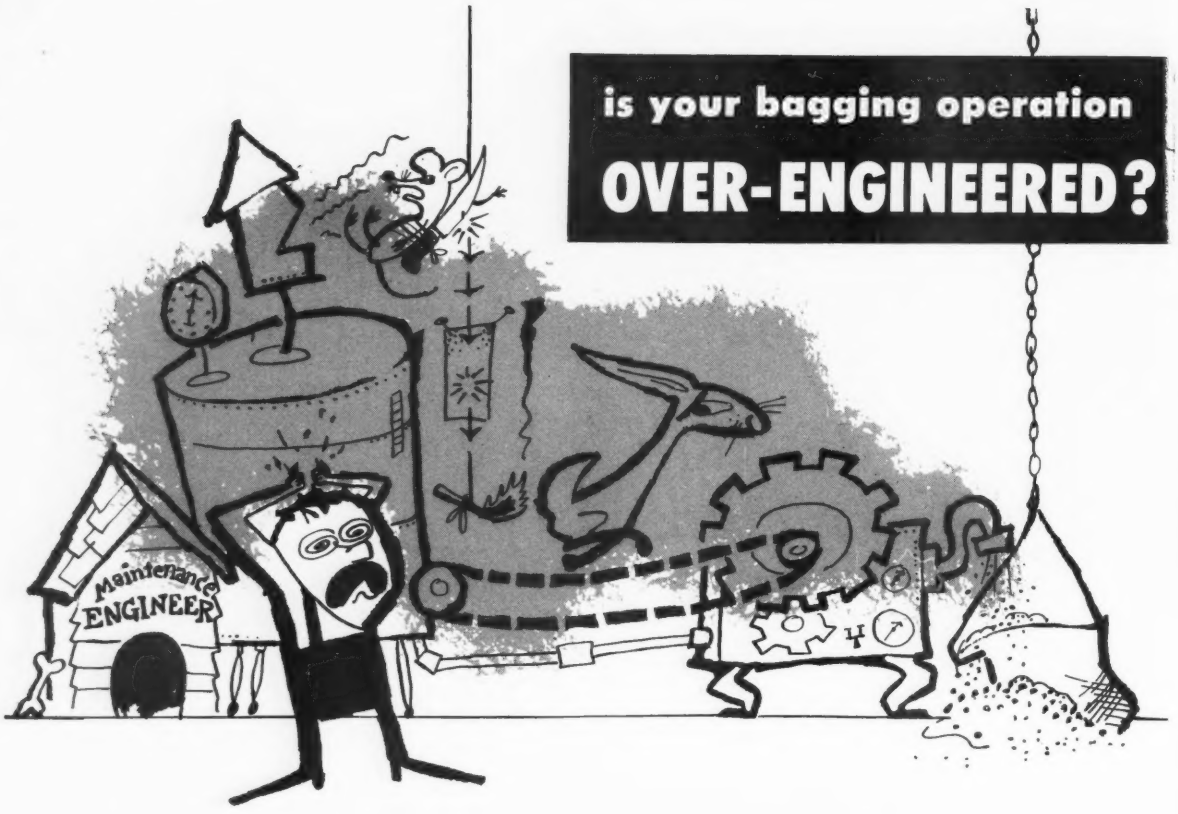

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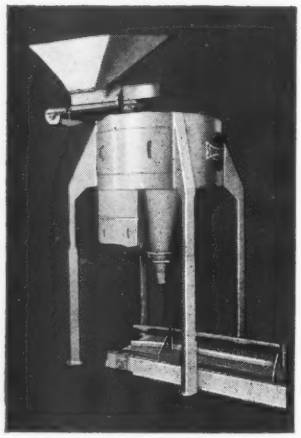

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IN THIS ISSUE

▸ Dr. Russell Coleman, National Plant Food Institute executive vice president, talks about the Institute's expanded program for the South . . . **page 36.**

▸ Business economics relating to the fertilizer solutions industry came in for some healthy discussion at the 1957 National Fertilizer Solutions Association Convention November 17–19 . . . **page 38.**

▸ As reported last month, the Middle West Soil Improvement Committee voted at its Oct. 31 meeting to consolidate its activities with NPFI. Other action at the meeting and photos of some of the delegates . . . **page 40.**

▸ How will new farm policy affect future markets? While a direct answer to this question is not available at this point, Washington Editor John Harms examines major proposals to see where industry's interest may lie . . . **page 41.**

▸ Highlights of the November 6–8 Fertilizer Industry Round Table Conference begin on **page 42** along with a summary of The Round Table's objectives, its beginnings and growth.

▸ Articles and authors appearing in FARM CHEMICALS during 1957 are indexed for ready reference . . . **page 44.**

▸ A new sales promotion approach which DuPont will use in 1958 to sell garden chemicals for home use is described by Howard A. Weibel . . . **page 47.**

COVER PICTURE

United States Borax and Chemical Corp.'s huge new $20 million open pit mine and refinery which were dedicated November 13 at Boron, Calif., are seen in this aerial view. In the background is the company's old plant which eventually will be closed down. The new facilities will produce more than 70 per cent of the free world's supply of boron.

Farm Chemicals Vol. 120 No. 12 December 1957
PIONEER JOURNAL OF THE INDUSTRY

FEATURES

INDUSTRY NEWS

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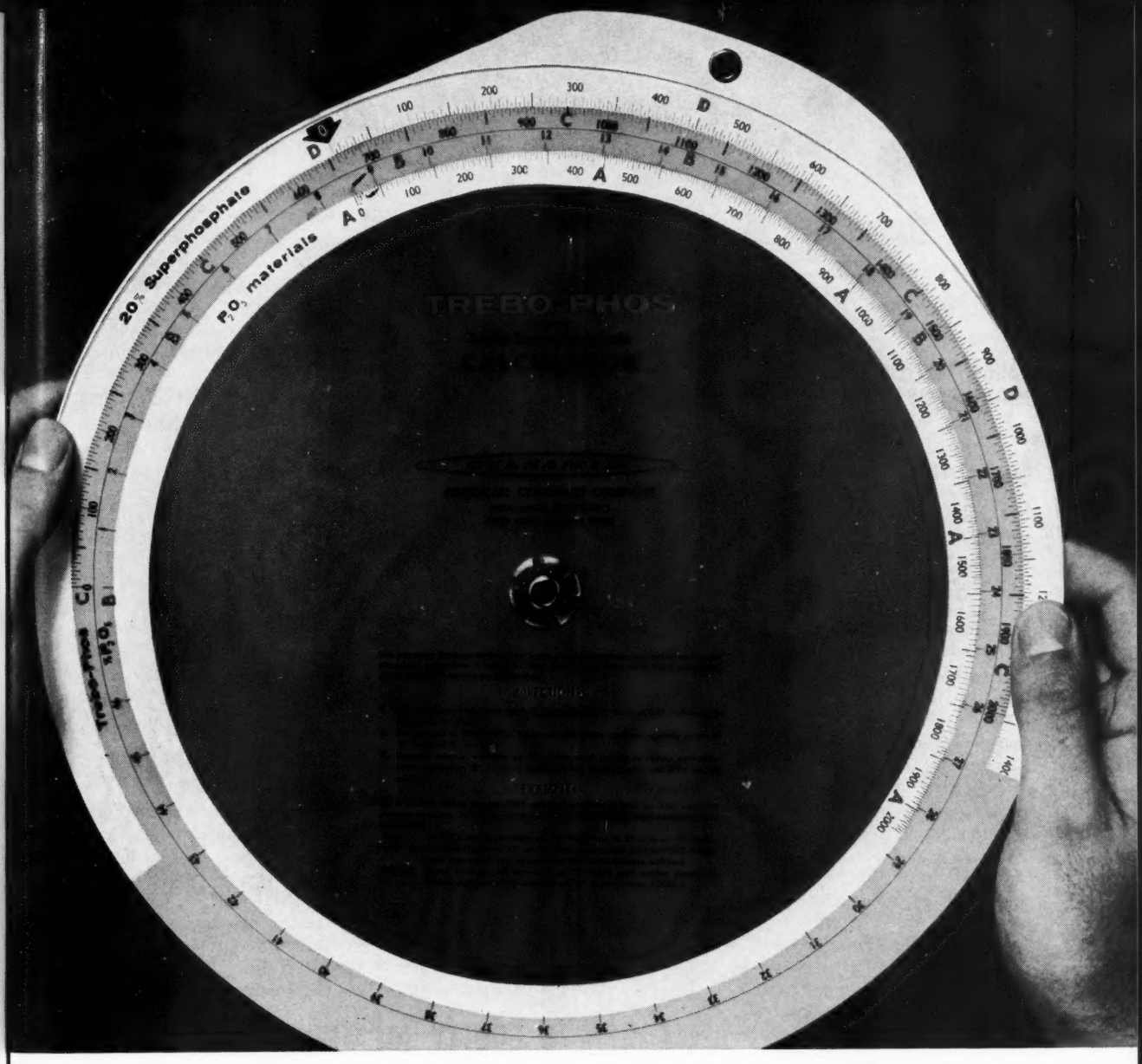

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For a 16-20-0 mixture suppose 1195 pounds is available in each ton after supplying nitrogen materials. To find how many pounds of Triple are needed:

STEP 1. *Set 1195 pounds available on "A" Scale next to 20 units on "B" Scale.*

STEP 2. *Opposite Pointer at "O" on "D" Scale read number pounds triple superphosphate, required on "C" Scale*
(Answer 619 lbs.)

STEP 3. *Above 1195 (pounds available) on "C" Scale read number pounds of normal superphosphate required on "D" Scale*
(Answer 576 lbs.)

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LARGE TRITHION PLANT PLANNED BY STAUFFER

Trithion, the organic phosphate pesticide developed by Stauffer Chemical Co., will move into large-scale production prior to the next crop season, according to the company.

Plans have been completed for construction of a multi-million pound Trithion plant at Henderson, Nevada. It is expected to be in operation by February. The unit will serve both domestic and foreign markets, but according to Dan J. Keating, Stauffer vice president and general manager of the Agricultural Chemicals Div., consideration also is being given to building additional Trithion manufacturing facilities abroad.

Trithion, which chemically is O, O-diethyl S-p-chlorophenylthiomethyl phosphorodithioate, is reported to kill not only aphids and mites but also their eggs, including seasonal forms. It has the longest residual activity of any common organic phosphate, according to Stauffer, and is safer to handle than many of the phosphate insecticides.

STUDY METHODS FOR ESTIMATING FUTURE PLANT FOOD DEMAND

A research project to develop methods for estimating regional and national demand for plant food, one and two years in the future, has been established by the National Plant Food Institute and will be conducted by the North Carolina Agricultural Experiment Station under a grant from the institute. Dr. R. A. King is project leader for the study, and Wilson Riggan, research assistant.

Dr. King hopes to be able to evaluate all of the various factors which influence trends in fertilizer consumption, and to develop a formula which will make possible at least short-term projections of demand. The study will consist of a thorough examination of previous work in this field, an exhaustive evaluation of available data and an attempt to construct appropriate models on the basis of this information for estimating future fertilizer consumption trends.

DOUBLE UREA CAPACITY AT HERCULES CAL. PLANT

Hercules Powder Co. has announced it will double its capacity for the production of urea at the Hercules, Calif., plant.

Several months ago Hercules disclosed plans to construct a 10,000 ton-a-year facility to make urea in solution at a new plant adjacent to existing anhydrous ammonia facilities at Hercules.

In response to increased demands from agricultural and industrial users of urea, directors of Hercules have approved expansion of the plant under construction so that it would have a capacity of 20,000 tons a year.

The plant will produce a new Hercules product, UN-32, a urea nitrate solution. UN-32, which has been manufactured by Hercules using ammonium nitrate made by the existing plant, is a high nitrogen content liquid.

AP&CC OPENS OFFICE AT COLUMBUS, OHIO

A new office to serve Ohio, eastern Indiana, southern Michigan and Kentucky has been opened at Columbus, Ohio, by American Potash & Chemical Corp.

Chester A. Lawton, who has been with AP&CC since 1950 as district representative in the midwestern area, has been appointed manager of the new office, which is located at 12 North Third St. in Columbus.

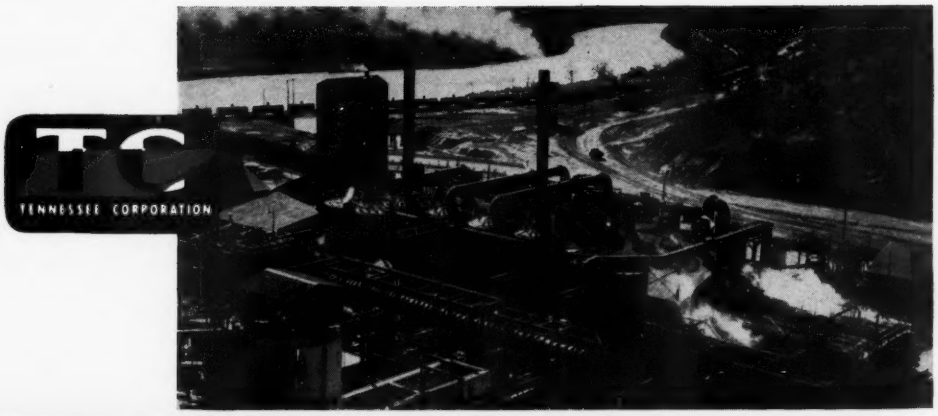
BLAZE DESTROYS ODESSA SW FERT. & CHEM. PLANT

The plant of Southwest Fertilizer and Chemical Co. located about 10 miles west of Odessa, Tex., has been destroyed by fire of undetermined origin, causing loss estimated at several hundred thousand dollars, according to W. G. Nelson, general manager for the company.

FARMERS EQUITY MEMBERS VISIT SOHIO

Some of the 250 members of NFE who visited Sohio. H. H. Tucker and D. C. Stoll of Sohio; C. O. Guy, Lima Assn. of Commerce; U. S. Kreider, National Equity pres.; G. A. Knipp, Equity Dairy and H. B. Calvelage, Ohio Equity Exchange Co.

Members of the National Farmers Equity from a dozen midcontinental states, as part of their annual convention held in Lima, Ohio, visited Sohio Chemical Co.'s nitrogen products manufacturing facilities to see how farm chemicals are produced in this $18 million petrochemical plant. About 250 visitors were conducted on a tour of the anhydrous ammonia, nitric acid and urea manufacturing units and the rail car and truck loading facilities.



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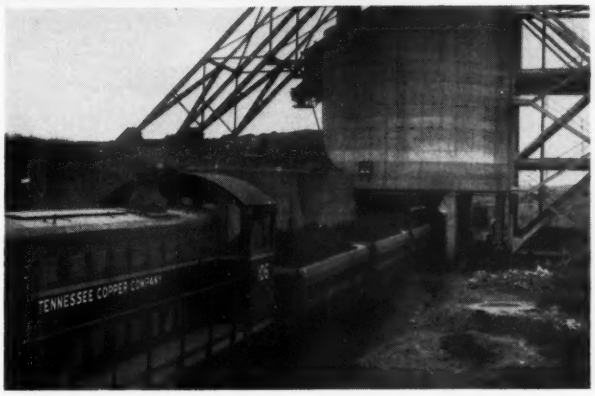

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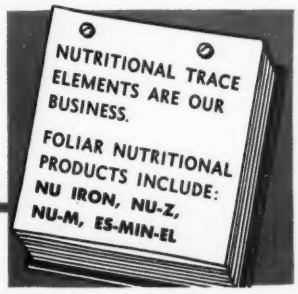

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FARM CHEMICALS

— *Business & Management* —

STAUFFER EXPANDS RICHMOND, CAL., PLANT

Stauffer Chemical Co. will enlarge its Richmond, Calif., plant to produce 50,000 tons annually of pelletized single superphosphate, Roger W. Gunder, Stauffer vice president for western operations, has announced.

The plant will use a process developed by Stauffer engineers in cooperation with a Southwestern engineering firm, and is expected to be in production about March 15, 1958.

Wilson & Geo. Meyer & Co., exclusive sales agents for Stauffer's three superphosphate plants on the Pacific Coast, will handle the sale of the pelletized product.

CALUMET N PRODUCTS IN LARGE-SCALE PRODUCTION

Calumet Nitrogen Products Co. has started large-scale production of ammonia for use in plant foods and by industry at its new plant in Hammond, Ind., Jay H. Forrester has announced.

Capacity is 300 tons a day of anhydrous ammonia. The ammonia plant operates in conjunction with a nitric acid plant and an ammonium nitrate solutions plant on a 24-acre site north of the Calumet ship canal in Hammond.

Construction of the plant required 3,000 tons of steel and 30 miles of pipe.

Products of the new plant are available from Standard Oil Co. (Ind.) and Sinclair Chemicals, Inc., a subsidiary of Sinclair Refining Co., which with Standard Oil is a joint owner of Calumet.

DEDICATE SPENCER RESEARCH CENTER

Spencer Chemical Co. dedicated its new research center in suburban Kansas City on October 22. Dr. Charles N. Kimball, president of the Midwest Research Institute, was principal speaker at a dinner following the dedication ceremonies.

The center, located at 9009 W. 67th St. in Johnson County, Kans., will be devoted to research and development of new and improved products in the general fields of agricultural and industrial chemicals and plastics.

IMC INCREASES COMMON SHARES TO 5 MILLION

Stockholders of International Minerals and Chemical Corp. have voted an increase in the number of common shares from 3 million to 5 million.

Louis Ware, IMC president, told the 48th annual meeting of shareholders that the increased stock authorization was not requested for any immediate need but to make such an issue possible in the event of future contingencies "such as the acquisition of desirable properties or processes."

Ware said that sales and earnings for the current fiscal year will be above 1956–57, when sales exceeded $100 million for the first time.

MONSANTO UREA PLANT TO BE BUILT IN ARK.

Construction of a urea plant at El Dorado, Ark. will get underway before the end of the year, reports J. L. Christian, Monsanto vice president and general manager of the Inorganic Chemicals Div. The 100-tons-per-day plant is expected to be on stream by early fall of 1958.

Urea will be produced in both prill and solution forms. The raw materials, ammonia and carbon dioxide, are made at the Inorganic division's El Dorado chemical plant.

HESTER LABS COOPERATES IN TUNNEL PROJECT

The Jackson B. Hester Agricultural Research Laboratories cooperated with Olmsted Brothers, landscape architects, in analyzing the soils for the landscaping of the 14-mile Patapsco Tunnel Project in Baltimore, Md.

The analyses consisted of 3,186 individual determinations, and recommendations for soil amendments were made.

ST. GEORGES & KEYES APPOINTED BY STAUFFER

Appointment of St. Georges and Keyes, Inc., New York and Chicago, to handle the advertising of the Agricultural Chemicals Div. of Stauffer Chemical Co., New York City, is announced by D. J. Keating, vice president of the company and general sales manager of the division.

ISRAELI AG SPECIALIST VISIT L. A. AREA

A Government of Israeli agricultural specialist recently visited a well known Los Angeles area industrial agronomist to study the different uses of liquid fertilizers in the U. S.

Aron Beresky and R. L. Luckhardt

Aron Beresky, agronomist for Fertilizer and Chemicals Ltd., Haifa, discussed use of aqueous ammonia fertilizer advantages with R. L. Luckhardt, supervisor of agricultural technical service, Collier Carbon and Chemical Corp., manufacturers of Brea Brand fertilizers.

For the last two years the Israeli specialists have been conducting a series of field tests with anhydrous ammonia, aqueous ammonia, ammonia nitrate solution and dry ammonium phosphate.

57 sample tests per hour is our way of proving

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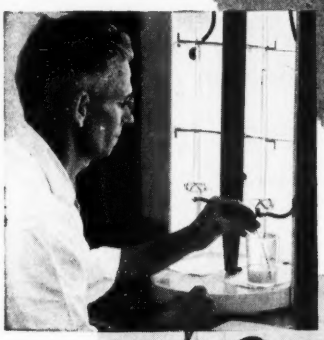

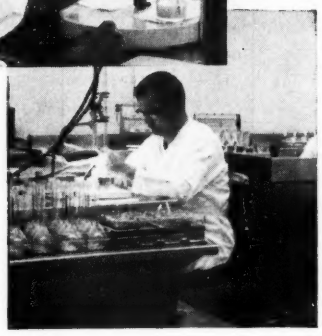

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FARM CHEMICALS

Business & Management

AMERICAN CYANAMID CO. OPENS EXHIBIT HALL

An exhibit featuring chemistry's importance to present day agriculture is a new attraction for visitors to New York City's Rockefeller Center.

Planned by American Cyanamid Co. as a 50th Anniversary contribution to public understanding of chemistry, the exhibit shows how chemicals are being used to increase farm production, conserve natural resources and improve the nation's health and living standard.

MISS. COOP TO BUILD NEW FERTILIZER PLANT

Mississippi Federated Cooperatives has awarded a contract for construction of a $325,000 fertilizer plant at New Albany to Mitchell Engineering Co. of Columbus.

The new plant will manufacture 30,000 tons of mixed fertilizer annually, employing about 50 persons during peak season and 20 on a regular basis.

MONSANTO SHIPS NH_3 BY BARGE ON OUACHITA RIVER

Monsanto Chemical Co.'s El Dorado plant achieved a "first" last weekend with the initial shipment of anhydrous ammonia by barge on the Ouachita River.

Ammonia was transported by Wheeling Pipeline Co. in high-pressure tank trucks from the El Dorado chemical plant to the company's dock at Champagnole. The barge, which is leased by Monsanto, has capacity for 840 tons of ammonia in its six high-pressure tanks. Loading was done in about 42 hours.

EYMANN PROCESS OFFERED TO FERTILIZER INDUSTRY

National Potash Co. has been granted the exclusive right to authorize the use of the Eymann batch granulating process in the fertilizer industry, according to William B. Porterfield, vice president and sales manager of National.

The process was developed by Lewis Eymann, president and co-owner of the North-Ag Chemical and Supply Co., to meet the competition in that area where a closely sized granulated product is a necessity. Two plants have been using the process for almost a year, and both have reported excellent results, Porterfield said. Production with one-ton mixers ranged from 12 to 20 tons per hour with grades from 3–12–12 to 5–20–20 to 10–10–10.

Principal advantage of the process is said to be the low capital investment it requires. In most plants already producing pulverized fertilizer, conversion to the Eymann process can be made for under $5,000.

NP is offering the process as a service to the industry, and the company's technical service staff will assist in its installation.

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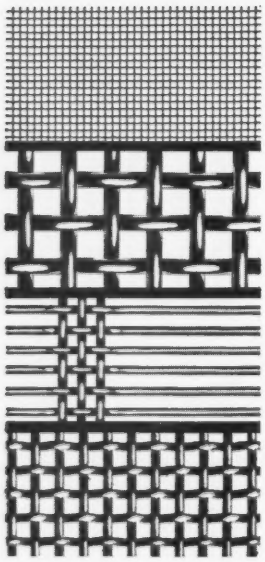

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CALENDAR

Dec. 2-6. 26th Exposition of Chemical Industries, New York Coliseum, New York City.

Dec. 2-5. Fifth Annual Meeting, Entomological Society of America, Hotel Peabody, Memphis, Tenn.

Dec. 3-4. Iowa State College Fert. Mfrs. Conf. and Fert. Dealers Short Course, Memorial Union, Iowa State College, Ames, Iowa.

Dec. 4-6. Soil Science Society of Fla. Annual Meeting; Symposium on Fertilizer Dec. 5, Univ. of Florida, Gainesville.

Dec. 9-12. Chemical Specialties Mfrs. Assn. meeting, Hollywood Beach Hotel, Hollywood, Fla.

Dec. 10-12. North Central Weed Control Conf., Hotel Savory, Des Moines, Iowa.

Dec. 11-13. Agricultural Ammonia Institute Annual Meeting, Hotel Marion, Little Rock, Arkansas.

Dec. 12-13. Beltwide Cotton Production Conf., Hotel Peabody, Memphis, Tenn.

Dec. 19-20. Mo. Soil Fertility Short Course, Univ. of Missouri, Columbia.

Jan. 7-8. Texas Fertilizer Conference, Texas A&M, College Station.

Jan. 8-10. Northeastern Weed Control Conference, Hotel New Yorker, New York City.

Jan. 9-10. 4th Annual Mississippi Insect Control Conf., Mississippi State College, State College, Miss.

Jan. 13-15. Joint meeting, Weed Society of America and Southern Weed Conf., Hotel Peabody, Memphis, Tenn.

Jan. 20-21. "Pest-O-Rama", sponsored by Alabama Assn. for Control of Economic Pests, State Coliseum, Montgomery, Ala.

Jan. 21-22. 10th Annual Pesticide School, North Carolina State College, Raleigh, N. C.

Jan. 21-23. Calif. Weed Conference, San Jose, Calif.

Jan. 22-23. Northwest Agr. Chemicals Industry Conf., Hotel Benson, Portland, Ore.

Jan. 23-24. 10th Illinois Spray Operators' School, Univ. of Ill., Urbana.

Jan. 30-31. Colo. Agr. Chemicals Assn. Annual Meeting, Cosmopolitan Hotel, Denver, Colo.

Feb. 13-14. Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago.

Feb. 20-22. Nitrogen Conf., Univ. of Minnesota, St. Paul.

Mar. 4-5. Western Cotton Production Conf., Hotel Cortez, El Paso, Tex.

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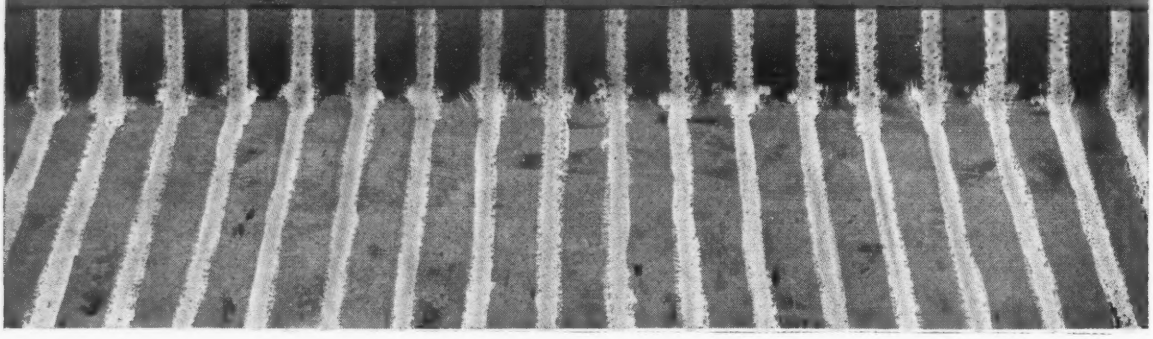

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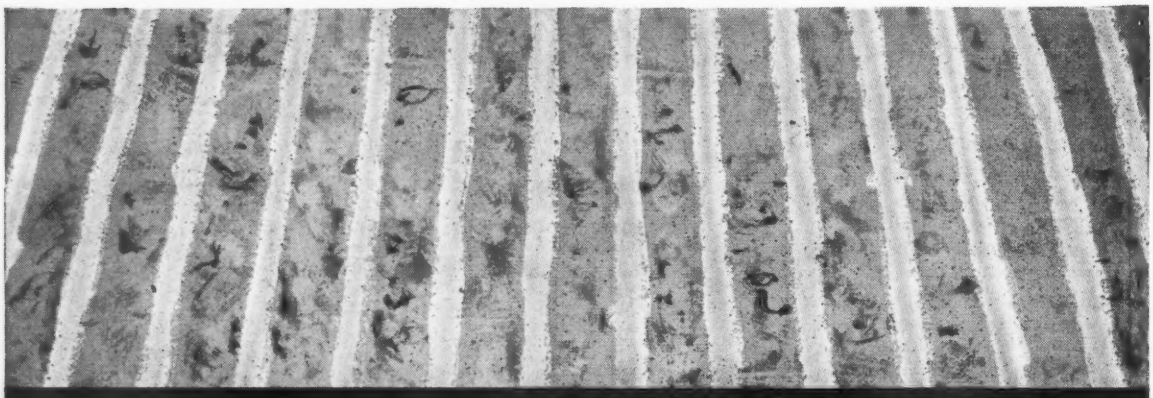

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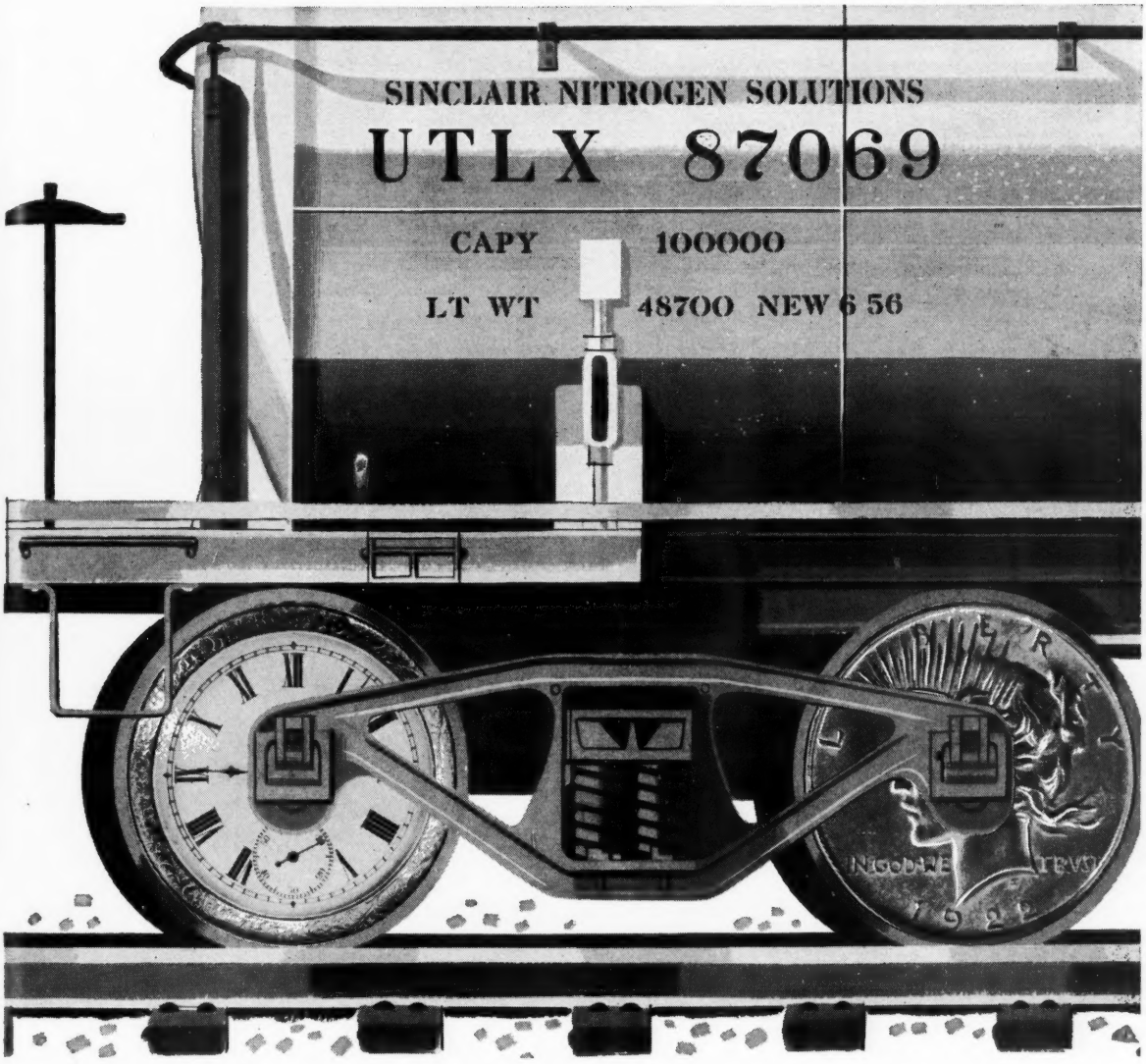

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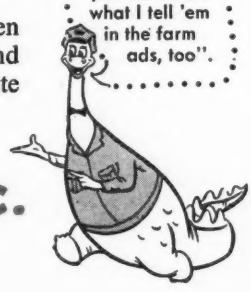

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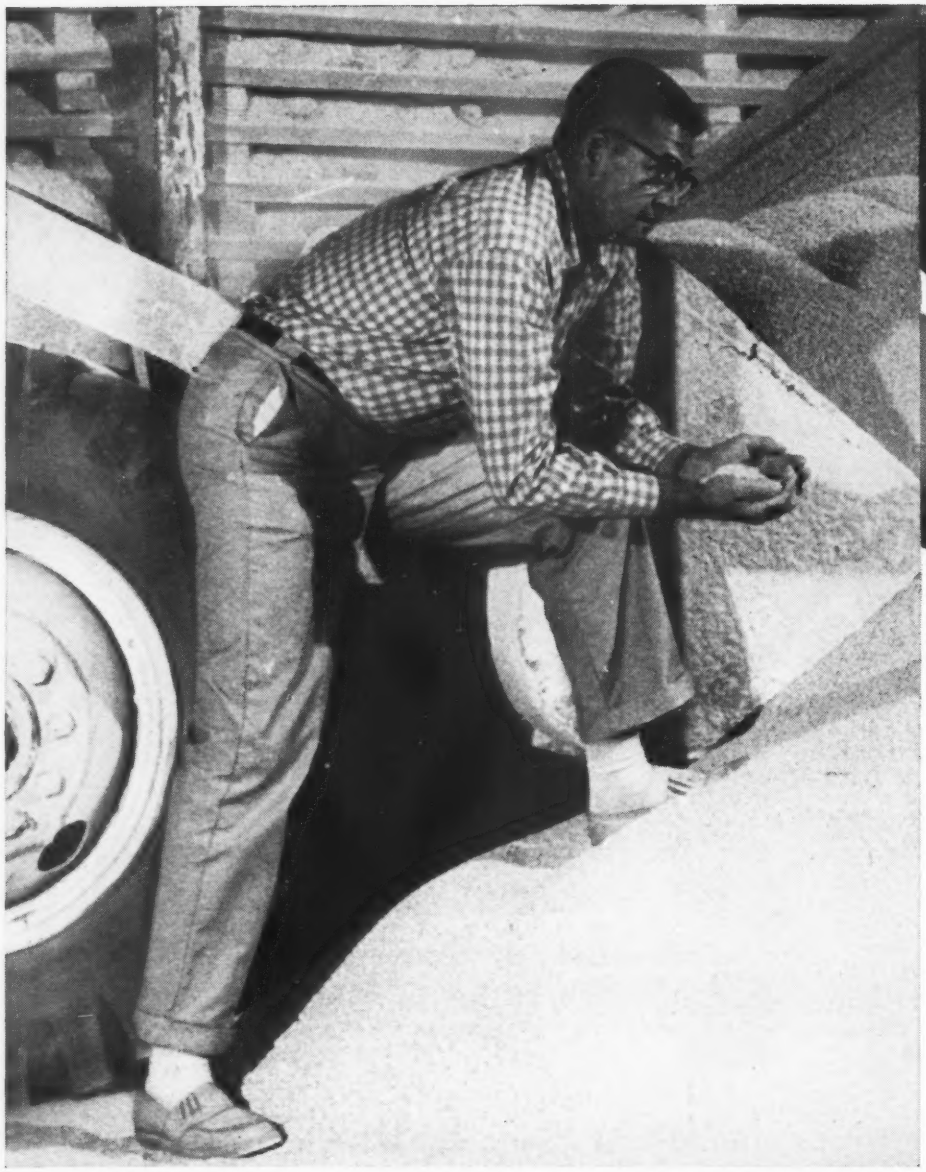
600 Fifth Avenue, New York 20, N. Y.— Phone Circle 6-3600
155 North Wacker Drive, Chicago 6, Illinois — Phone Financial 6-5900



"Step into the pile anywhere," says Don Peterson, General Manager of the Ashkum Fertilizer Company, "and you'll find every handful of Bumper Crop fertilizer a top sample." Strong demand for the company's granular fertilizers in East Central Illinois and West Central Indiana keeps the plant busy the year round.

Plant Superintendent Chuck Durham watches production closely when plant is "on stream." Good materials here make a good product.

A stop at the granulator shows Clint Serene the mix is right. Full-time local residents provide a highly efficient labor force.

Final check shows uniform pellets coming off the belt. Granulation like this holds recycle to a minimum ... reduces dust problems, too.

Granulation results prove...

International's Triple Super belongs in our plant"

says General Manager Don Peterson
Ashkum Fertilizer Company, Ashkum, Illinois

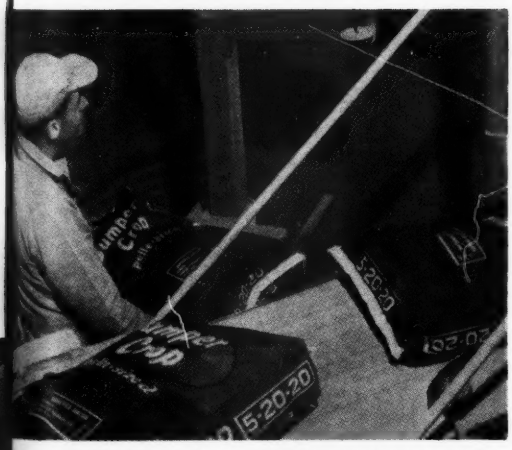
Granulation is more than a process at Ashkum Fertilizer. It's the sales-life of the company — for Ashkum sells all mixed goods in granular form.

Granular fertilizers have helped put this small farm community "on the map" during the plant's four years of operation.

The same deliberate care that went into the planning and construction of the modern plant (a William Tyler installation) goes into the selection of basic goods.

"International's Triple Super has earned its place in our plant," says General Manager Don Peterson. "We can bank on its arriving in good physical condition for easy handling. We like the way the triple ammoniates . . . and the uniform pellets that roll off the belts are proof of top granulation."

You can benefit from Ashkum Fertilizer's experience. Rely on International for dependable, helpful service and top-quality product. Write or wire for full information.



Conveyor belt from bagger loads directly into waiting truck as bagging foreman Glenn Heideman checks weight. Conveyor telescopes to load either front or back of truck.

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

PHOSPHATE CHEMICALS DIVISION .... 20 N. WACKER DRIVE, CHICAGO 6, ILL.

FARM CHEMICALS People

Abbott Laboratories. Henry C. Spruth has been named head of agricultural farm research. Prior to his new appointment, Spruth headed the Bioassay Laboratories for 22 years.

The American Agricultural Chemical Co. new appointments:

PRODUCTION DEPARTMENT. R. E. Lehmkuhl, former production superintendent at the National Stock Yards, Illinois fertilizer works, becomes responsible for production at the Danville, Illinois and Seymour, Indiana plants; R. T. Green replaces Lehmkuhl at National Stock Yards.

FERTILIZER SALES DEPARTMENT: J. C. Sliger to manager Danville, Ill.—Seymour, Ind. sales: W. H. Masters to Danville—Seymour sales: V. W. Huttemier to agronomist, Danville—Seymour; R. P. Cagley, to manager, Cairo; W. H. Phillips to assistant manager, National Stock Yards; C. E. Lowder to assistant manager, Washington C. H., Ohio; W. J. White to manager, Henderson; W. F. Turner, Jr., to assistant manager, Buffalo, N. Y.; and H. A. Finch to assistant manager, Savannah, Ga.

H. J. Baker & Bro. Appointment of Clarence Fitzgerald to the Atlanta, Ga. sales staff is announced by the firm.

California Spray-Chem. Corp. The following new appointments have been announced for Calspray's Research and Development Department: Dr. Joseph E. Moore to research chemist, Dr. Lorin R. Stelzer to research entomologist, and Dr. George R. Hawkes to district agronomist at Calspray's Lindsay branch office.

Chemagro Corporation. New sales representative for Chemagro Corp. with headquarters in Michigan is William H. Bricker, former branch manager for California Spray-Chem. Corp.'s midwest region. Bricker will service Ohio and the eastern portions of Indiana, Kentucky and Michigan.

Bricker

Davison Chemical Co. Mr. O. D. Myrick, Jr. has been named director of the firm's newly organized Development Planning Department. Since joining the company in 1942, he has served in several capacities, most recently as manager of development.

Myrick

Diamond Alkali Co. New sales manager for the midwest district is Frank W. Miller, former sales manager for Staley Milling.

The Dow Chemical Co. Two key members of the Agricultural Chemical Development staff, John H. Davidson and Dr. Henry E. Gray, have been assigned to new positions at the company headquarters in Midland. Davidson, has transferred from the field research group at South Haven, Mich., to handle special projects and Dr. Gray, new project leader, succeeds Dr. O. H. Hammer who now heads the Plant Science section in Agricultural Chemical Research.

Miller Chemical & Fertilizer Corp. announces the appointment of Frank R. McFarland to technical sales director; Lou F. Fries to sales manager of the Home Garden Division; and Ross E. Holtz to sales manager of the Export Division.

Nitrogen Div., Allied Chem. & Dye Corp. Mr. Hugo Reimer, president of Nitrogen Div., has been elected chairman of the Sponsoring Committee of the Future Farmers of America Foundation for 1958. He will direct fund raising activities for the Foundation's awards program.

Reimer

J. T. Stevens is new district sales supervisor for the South Point, O. district. R. A. Lemler becomes Midwest product supervisor for direct application solutions with headquarters in Indiana.

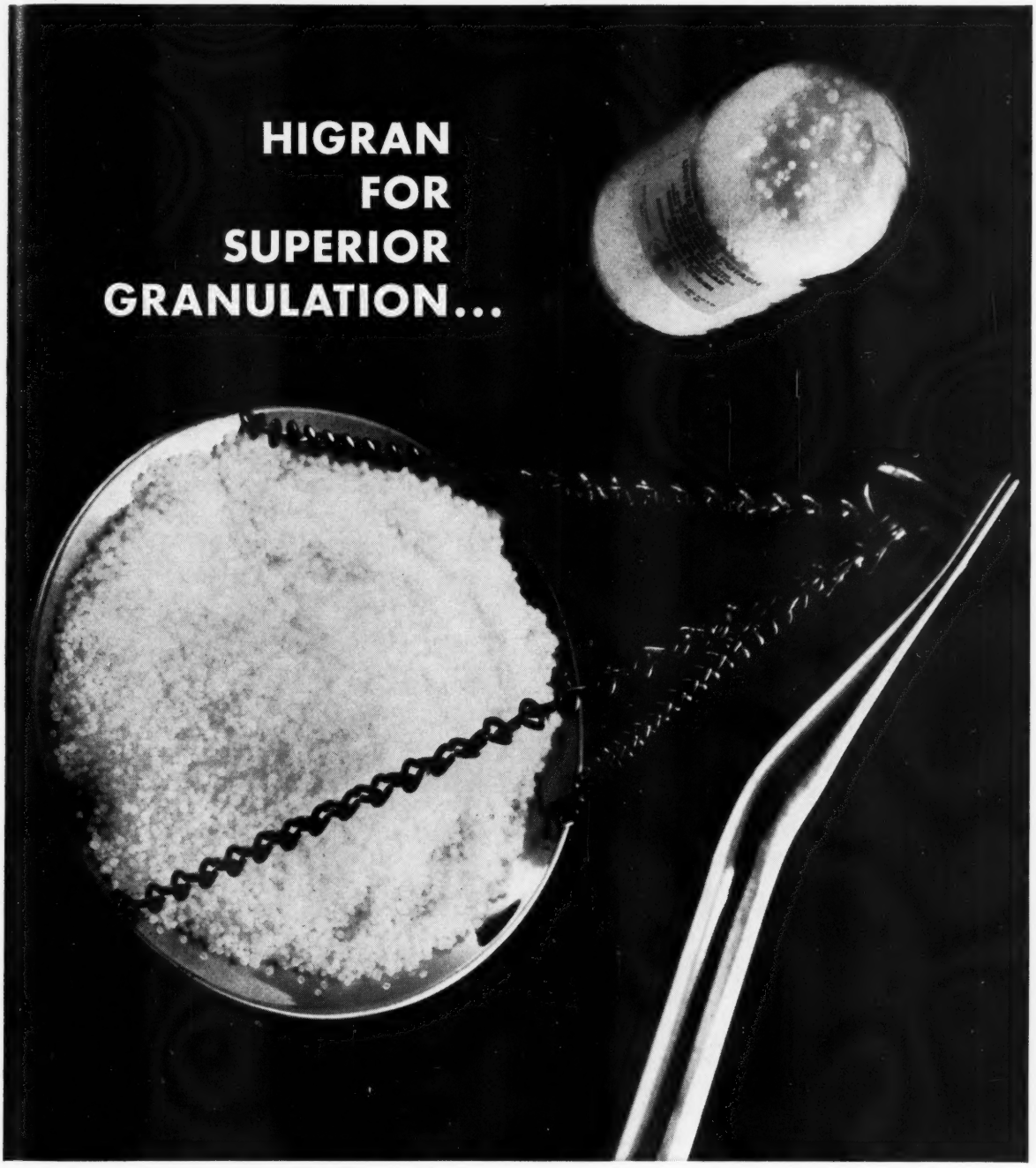
Norkem Corporation. Two new men have been added to the field staff. They are E. Ray Carter, former Walla Walla County horticulturist, and Mr. W. Frank Alexander, former west coast manager for Hoffmaun-LeRoche Chem. Co.

Northwest Nitro-Chemicals, Ltd. The promotion of Howard L. Sanders, former vice president and treasurer of Commercial Solvents Corp. to president of the Canadian affiliate of CSC, has been announced.

Sanders succeeds Thomas L. Brook who goes to New British Dominion Oil Co. of Calgary as chairman of the board. The supervision of Northwest Nitro-Chemicals' new $22 million plant at Medicine Hat will be among Sanders' responsibilities in his new capacity.

Sanders

(Continued on page 20)



USP'S SPECIALLY SIZED HIGRADE GRANULAR

USP's new Higran—a white granular muriate of potash specially sized for the manufacture of modern fertilizers. Non-caking and free-flowing throughout, Higran is the *purest* agricultural granular muriate of potash now available (62/63% K_2O).

You're invited to contact USP for consultation. Our Technical Service Department welcomes your inquiries.

USP also offers Higrade muriate of potash—62/63% K_2O—and Granular muriate of potash—60% K_2O—both free-flowing and non-caking.

UNITED STATES POTASH COMPANY
DIVISION OF UNITED STATES BORAX & CHEMICAL CORPORATION
50 Rockefeller Plaza, New York 20, New York
Southern Sales Office: Rhodes-Haverty Building, Atlanta, Georgia

SUNSHINE STATE POTASH A PRODUCT OF NEW MEXICO U.S.A.
REG. U. S. PAT. OFF.

MEMBER: AMERICAN POTASH INSTITUTE

The A.A.C. Co. Plant at Carteret, New Jersey

Another source of AA quality products

To meet your "quick" or "long term" requirements for a variety of chemicals, depend on the A.A.C. Co. You can count on uniform quality and guaranteed purity through rigid laboratory control. You'll get expert assistance from skilled research people in developing "specials" for unusual projects. And you can count on prompt service.

CHOOSE FROM THESE AA QUALITY® PRODUCTS FOR FARM AND INDUSTRY

Florida Phosphate Rock • Superphosphate • AA QUALITY Ground Phosphate Rock
All grades of Complete Fertilizers • Gelatin
Bone Products • Fluosilicates • Ammonium Carbonate • Sulphuric Acid
Phosphoric Acid and Phosphates
Phosphorus and Compounds of Phosphorus

THE American Agricultural Chemical Co.

GENERAL OFFICES: 50 CHURCH STREET, NEW YORK 7, N. Y.

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Montgomery, Alabama
Norfolk, Virginia
No. Weymouth, Massachusetts
Pensacola, Florida
Pierce, Florida
Saginaw, Michigan
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Three Rivers, New York
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Agricultural Chemicals Ltd.
Fort Chambly, Quebec
London, Ontario
Port Hope, Ontario

VIEWING WASHINGTON

with Farm Chemicals Washington Bureau

on agriculture

Sputnik will make itself felt in "100 different areas of government activity," according to one congressional budget expert. Influential Rep. Jamie Whitten, a member of both defense and agricultural subcommittees of the House Appropriations Committee, says that it shouldn't, but predicts that it will. He says that if "proper economies" are made in the present defense budget more than enough money would be released to cover the needs of the missile and satellite programs without cutting domestic programs.

The prediction comes on the heels of President Eisenhower's plea for federal-spending reductions in postponable or non-essential programs. The President's idea is to hold the over-all federal budget down while at the same time increasing the spending on missile and satellite programs.

Many industrial as well as agricultural services may be cut in the wake of this plea--if the pressure is put on. The Budget Bureau already has issued a directive to all agencies to put services on a self-supporting basis. It has asked for proposals for presentation to Congress to increase fees where necessary, boost premiums, charge for publications, increase loan charges, and charges for inspection and testing, etc.

Examples of where increases might come: The Public Health Service would charge costs for testing batches of vaccines. Charges for small business loans would be increased. The Defense Department would charge for testing and inspecting in product qualification for procurement. Mineral-leasing fees and rent would be increased. And so on.

No formal industrial program-reduction proposals have yet been made--awaiting the forthcoming congressional session. Among the vulnerable industrial services, however, is the Chemical & Rubber Division of the Business and Defense Services Administration--which was almost wiped out last session.

On the farm front--the cuts might be quite drastic. The reason is that the government is spending more than $5 billion on farm programs, many of which are aimed at reducing production, but production continues out of control. Defense planners eye the farm budget as an ideal place to start getting money for missiles.

First item to be cut is the $500 million Acreage Reserve of the Soil Bank, which pays high rates per acre to farmers for taking surplus crops out of production. The program is set for the 1958 crop year, but Congress indicates it will kill it after that. The Conservation Reserve, costing about $100 million, is considered safe.

Unless Ike orders drastic cuts in domestic programs and Congress goes along, other USDA budget cuts would be hard to make, for it would mean curtailing services during an election year. If drastic cuts are made across-the-board of govern-

VIEWING WASHINGTON

agriculture continued

ment agencies, one official says the most that could be cut --and it's a lot--is $1.7 billion. This generally would cut the USDA spending authority down to last year's level.

The Agriculture Department's Soil Bank land goal is to get a total of 30 million acres signed, including 6½ million contracted for the long-range Conservation Reserve in previous years. USDA figures it can get up to 15 million acres into the Acreage Reserve between the January 13-March 7 sign-up period. Aim is to get 5½ million from wheat, 5 million from corn, almost 4 million cotton, and a total of about 1/3 million acres from tobacco and rice. This total goal compares with the 1957 sign-up of 21 million acres. USDA expects to get about 10 million additional acres into the Conservation Reserve this winter and spring.

Farm Outlook for 1958, as developed by the nation's top agricultural economists at the Annual Outlook Conference, is this: Prices for commodities to average the same as in 1957. Depending upon the weather, 1958 production probably will exceed the 1957 level and set a new record high. Production expenses are expected to rise more, thus offsetting any increase in gross income resulting from larger production. Retail prices of food will rise further, but farmers won't share in the rise. Exports of farm commodities will drop from last year's record, but still run higher. Government payments to farmers will be down slightly. Farm debt will continue to rise, but value of farm assets also will increase. Land values will continue to go up.

These farm cost items are expected to be higher in 1958: Farm property taxes, interest rates, and prices paid for farm machinery, motor vehicles, farm real estate, fencing materials, fertilizer, and some farm supplies.

On fertilizer, specifically, the USDA "Farm Cost Situation" has this to say: "Consumption of fertilizer materials for the year ending June 30, 1956, was down about a half-million tons compared with the previous year. But because of the rising nutrient content of fertilizers used, the reduction in use of plant nutrients was only about 60,000 tons.

"If the nutrient content of fertilizers continues to rise at the same rate as last year, fertilizer shipments as indicated by tag sales in states where information is available would indicate that consumption of plant nutrients for the year ending June 30, 1957, may have been about the same as that of the record year that ended in midsummer of 1955."

On pesticides, USDA says most prices are at about the same level as a year ago. Prices of a few, such as aldrin and 2,4-D, have moved upward along with chemicals generally. Production and use of pesticides have been generally at about the same level in 1957 as a year ago, USDA says. A recent survey showed that in 1955 farm expenditures for pesticides totaled an estimated $283 million--or about $60 per farm.

WHEN ONE-HALF OF THE BOXCAR IS EMPTY... THE TL-6 TURNS AROUND INSIDE THE CAR AND UNLOADS THE OTHER HALF

Compact TL-6 TRACTOLOADER® keeps material moving for CHENOA MILLING COMPANY, Chenoa, Illinois

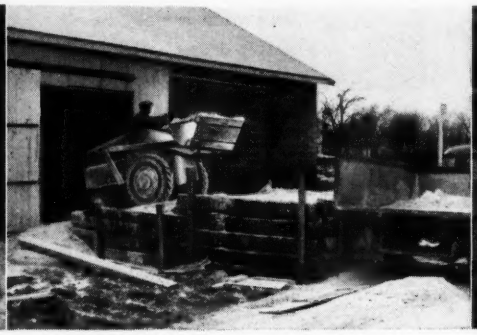
Since there isn't a ramp at Chenoa Milling Company's warehouse (due to railroad restrictions), the TL-6 enters the boxcar containing grain about 200 yards away — where there is a ramp. Car is then moved to warehouse. Here a makeshift bin is fed by the TL-6 and the grain moves into the warehouse on a conveyor. The boxcar stays at the warehouse until it's completely unloaded — no need to move it back to the ramp when half unloaded. The TL-6, with its compact design and short turning radius, easily maneuvers around inside the car to finish its job.

Why not let this ½-yd loader solve your confined-area material handling problems? Get an on-the-job demonstration from your Allis-Chalmers construction machinery dealer.

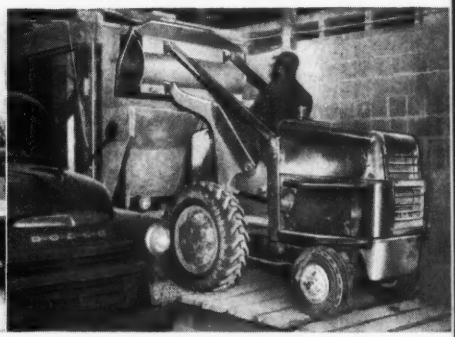
TRACTO — *a sure sign of modern design*

TL-6 QUICKLY HANDLES OTHER JOBS FOR CHENOA MILLING, TOO!

CARRIES FERTILIZER FROM BOXCAR INTO STORAGE SHED — no losing the load, either, with tip-back bucket. Makes complete cycle without shifting — operator just pushes or pulls a lever to go forward or reverse.

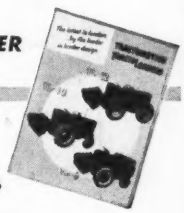


DELIVERS FERTILIZER TO CUSTOMER'S TRUCK — a full bucket every time. TL-6 gets load without ramming with smooth crowding action of hydraulic torque converter drive.



LOADS HOPPER WHEN MIXED FERTILIZER IS ORDERED—elevator transports it to mixer. TL-6 makes hairpin turns into and out of the various bins for the different kinds of fertilizer.

SOLD AND SERVICED BY YOUR ALLIS-CHALMERS CONSTRUCTION MACHINERY DEALER



Send For Free Descriptive Catalog
On The Complete Line Of Tracto-Loaders

TRACTOMOTIVE

TRACTOMOTIVE CORPORATION, DEERFIELD, ILLINOIS

TRACTOMOTIVE CORPORATION, Dept. FC
Deerfield, Illinois

☐ Please arrange a demonstration of the TL-6
☐ Send catalog on Tracto-Loaders

Name .....
Title .....
Company .....
Address .....
City ..... State .....

NOW

IS THE

TIME TO

WRITE

TABUTREX

(LIVESTOCK SPRAY)

LABELS

TABUTREX is the *non-toxic* insect repellent base which is revolutionizing the concept of livestock fly control by setting up an *invisible barrier against flies.*

TABUTREX makes an economical, unexcelled spray effective in barns *as well as in the pasture.*

TABUTREX is *approved* for use on dairy and beef cattle.

TABUTREX presents *no residue problem.*

Get ready NOW for the 1958 fly season!

MAKE PROFITS WITH TABUTREX IN 1958!

For new information on TABUTREX FORMULATIONS and labeling

Write:

Tabutrex*
INSECT REPELLENT

Glenn Chemical Co.
2735 N. Ashland Avenue
Chicago 14, Ill. Phone· EA 7-9350

*Trademark

FARM CHEMICALS People

(Continued from page 14)

Olin Mathieson Chem. Corp. New director of marketing for the Organic Chemicals Division is Laurence E. Russell, former manager of the Sales Development Department, Industrial Chemicals Division.

Three other appointments in the Marketing Department have also been announced: Reid Malcolm to sales manager; B. N. Schrauf to sales development manager; and Dr. Albert H. Gower to product sales manager.

Port Fertilizer and Chemical Company. Cleve H. Tandy, 62, chairman of the board, died at his home near Brownsville on October 18.

Residex Corporation. F. Earl Frith has recently joined the firm as technical representative in the southern district, with headquarters at Roanoke. Frith is a graduate of Virginia Polytechnic Institute and was formerly employed by the Herbert Bryant Feed Co. in Leesburg, Va.

Frith

O. M. Scott & Sons. Appointment of Frederic M. Smith as vice president is announced by the firm.

Smith-Douglass Co., Inc. Gaither T. Newnam has been named to succeed Vernon T. Gornto, who has recently retired, in charge of safety and industrial insurance. He will also serve as labor relations representative.

Newnam

Southeastern Liquid Fertilizer Co.'s board of directors recently elevated two company officials to top posts. They are Jefferson I. Davis, Jr., former vice president and general manager, to president, and A. H. Walters, former sales manager, to vice president in charge of sales.

The Summers Fertilizer Co. announces the transfer of James C. Totman from the company's Bangor, Me., office to the home office, Baltimore, Md., where he will assume his new duties as assistant to the president.

Texas Gulf Sulphur Company's board of directors recently elected three new vice presidents —Dr. C. F. Fogarty, former head of the company's geological department in Houston, Texas; Edward C. Meagher, former treasurer, New York; and Emile F. VanderStucken, Jr., former secretary, also of the New York office.

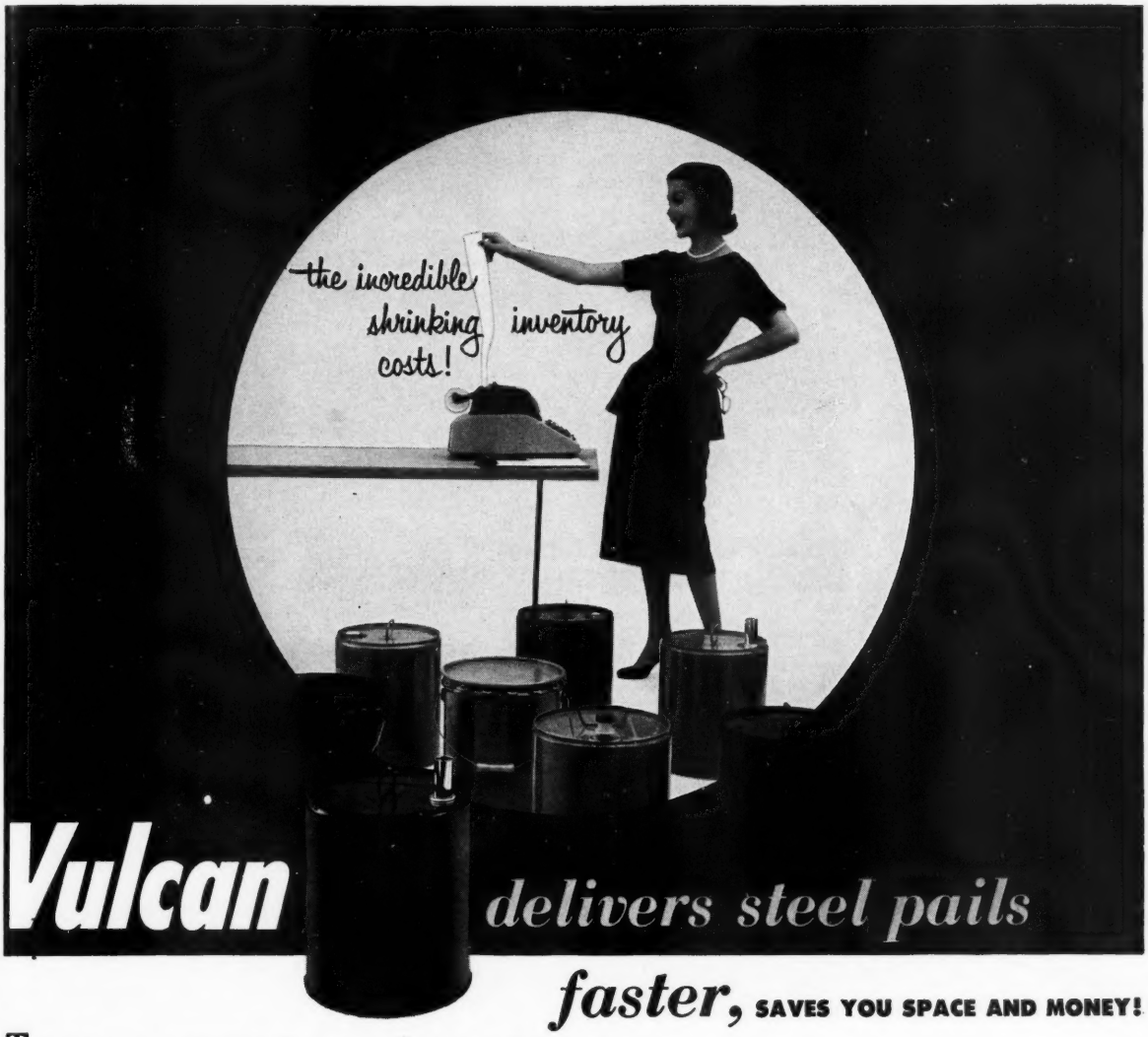
Velsicol Chemical Corp. Dr. William P. Utermohlen, Jr., has been appointed director of research at the company's main office and laboratories in Chicago, Ill.

Utermohlen

Prior to joining Velsicol, Dr. Utermohlen was assistant research director of the Toni Division of the Gillette Co.

Virginia-Carolina Chem. Corp. Recently elected vice president and general manager of the Fertilizer Division of V-C is James E. Nall. He will be responsible for the sales, marketing, advertising, production, and engineering activities of the company's multi-million dollar fertilizer operations.

Nall



Vulcan delivers steel pails *faster,* SAVES YOU SPACE AND MONEY!

This is a true case history of all the companies who use Vulcan steel shipping containers. Their composite story reads like this: delivery of pails forced them to tie-up excessive funds and space in a big inventory. They switched to Vulcan, and got faster delivery, in all quantities, on a precise and rigidly maintained schedule. Their inventory needs dwindled rapidly, and they had more free cash and manufacturing space. The same thing can happen to you, because Vulcan is an expert authority engaged exclusively in the manufacture of steel pails and drums, and maintains the largest warehouse stock of these items. This means we can deliver your needs and inventory savings at the same time. May we prove it to you?

NOW! REDUCE STEEL CONTAINER INVENTORY COSTS! MAIL THE COUPON TODAY FOR TEST SAMPLES AND THE NAME OF YOUR VULCAN REPRESENTATIVE!

Hi-Bake protective linings • one to 55 gallon capacities all variations of open or closed heads faster delivery from the largest warehouse stock • from a carton to a carload • brand name decoration • special designs

VULCAN CONTAINERS INC.
Bellwood, Illinois

VULCAN CONTAINERS INC., Bellwood, Illinois

Gentlemen: I am interested in:

- ☐ Pails, in the following sizes,.....
- ☐ Hi-Bake protective linings for (product).....
- ☐ 55 gallon drums.

Please get this information to—

Name.....

Company.....

Address.....

City.....Zone....State.....

Government

MORE TIME FOR STUDY OF LABELING RULE CHANGE

Interested persons will have until Dec. 31 to submit views on a proposed amendment to regulations for labeling commercial pesticides, USDA has announced.

This amendment, proposed on Sept. 11, would prohibit statements in the labeling of economic poisons that would directly or indirectly imply recommendation or endorsement of the products *or their ingredients* by any Federal agency.

Members of the pesticide industry asked USDA's Agricultural Research Service to extend the 30-day period originally specified for submission of views on the proposed regulation, so that those affected may give further consideration to the effects of the proposal.

Written views, data or arguments on the proposed amendment may be submitted to the Plant Pest Control Div., Agricultural Research Service, USDA, Washington 25, D. C.

TVA LOST $2.6 MILLION ON FERTS., MUNITIONS

TVA's financial statements for the fiscal year ended June 30, 1957 show that the fertilizer and munitions development work was carried on at a net expense of $2,642,656, compared with $1,127,746 during the 1956 fiscal year.

Sales of fertilizer materials were made to organizations cooperating in an educational program. Fertilizer not sold to test demonstration farmers was sold through cooperative and dealer channels for use in programs worked out with land grant colleges, wholesale distributors and agencies of the U. S. Dept. of Agriculture.

PLANT QUARANTINE INSPECTION STATION OPENED AT IDLEWILD

A new plant quarantine inspection station has been opened at the New York International Airport at Idlewild for the convenience of business firms and persons authorized to import plants and plant propagating material, USDA reports.

It will make possible clearing of plant imports in as little as three hours after arrival from abroad, according to officials of USDA's Plant Quarantine Div. Previously, incoming plant shipments had to be trucked in bond from Idlewild to the Hoboken, N. J. plant quarantine inspection house for processing, a procedure which often consumed three days.

FOR A Superior AGRICULTURAL LIMESTONE PRODUCT

BRADLEY HERCULES MILLS

From rough to finish . . .
in one low-cost operation

Constant progress in design and manufacture over the past 50 years has made Bradley Hercules Mills the standard pulverizer where a superior agricultural limestone product is desired. Automatic electrical feed control eliminates manual operation. Rugged, dustless construction, maximum accessibility keep maintenance costs at an absolute minimum. In sizes to meet the requirements of most any plant at moderate cost.

For complete information, write for Catalog No. 61

Bradley PULVERIZER CO.

LONDON ALLENTOWN, PENNA. BOSTON

NOW! **LOW** COST HIGH QUALITY EMULSIFIERS

FIELD-TESTED FOR *insecticide* FORMULATIONS

NEW!
EMCOLS
H-900
H-902

This important new advance in emulsifiers will definitely lower your insecticide costs by a substantial margin.

All the knowledge of the Emulsol laboratory has been used in developing Emcols H-900 / H-902. You can depend upon the same rigid quality control, the same uniformity in performance . . . the same superb technical service.

These economies are the direct result of new plant equipment and improved procedures.

Yes, it will pay you to look into Emcols H-900 / H-902. This emulsifier pair is effective separately or in combination for such insecticides as Aldrin, BHC, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Lindane, Parathion, Methyl Parathion, Toxaphene and others.

Check your Emulsol Technical Representative or write for full details including pesticide formulations using Emcols H-900 / H-902.

Serving Agriculture and Industry with dozens of EMCOL emulsifying agents.

Emulsol

DEPT. FA-12

EMULSOL CHEMICAL CORPORATION

division of Witco Chemical Company

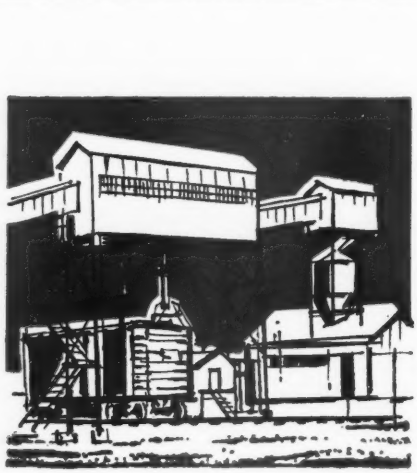
75 East Wacker Drive • Chicago 1, Illinois

FIRST check with NATIONAL POTASH...

Manufacturers of fertilizer can depend on NATIONAL POTASH for a coarse and standard grade muriate of potash.

- DUSTLESS
- FREE-FLOWING
- UNIFORM K_2O

Ample stocks and extensive storage and shipping facilities assure you of prompt delivery of both bulk and bagged potash even during the peak fertilizer season. In addition NATIONAL POTASH offers a Free Technical Service to aid fertilizer manufacturers. *Telephone, wire or write us today.*



NATIONAL POTASH COMPANY

205 EAST 42nd ST. • NEW YORK 17, N.Y. • ORegon 9-4950

212 Bell Building • MONTGOMERY, ALA. • AMherst 5-8234

Arcadian® News

Volume 2 | For Manufacturers of Mixed Fertilizers | Number 12

Nitrogen Division Tells Millions of Farmers . . .

THE BEST FERTILIZERS ARE MIXED FERTILIZERS

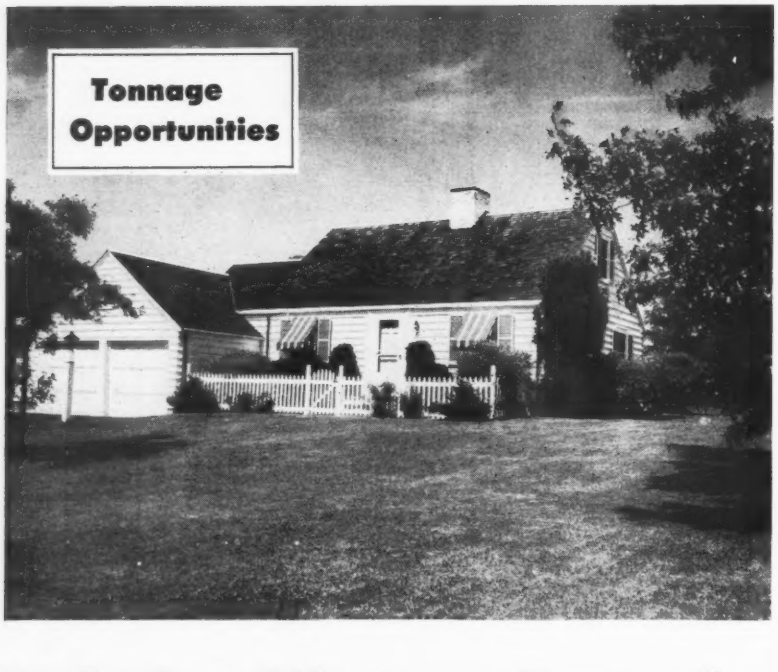
The powerful Nitrogen Division advertising campaign which started last fall will continue during 1958 to urge farmers to purchase their plant food in the form of mixed fertilizers.

The poster pictured below will soon appear in hundreds of locations in leading farming areas. It will be seen by millions of farmers at the time when they are considering the purchase of fertilizers for their 1958 crops.

Nitrogen Division, Allied Chemical, produces and sells nitrogen. But, Nitrogen Division has always aggressively supported the importance of using nitrogen in a balanced fertilizer program.

We trust that this campaign is helpful in increasing your sales and in stimulating your customers to place their orders early.

We will keep you posted on our continuing efforts to help you sell mixed fertilizers as this campaign unfolds. In the meantime, we will appreciate your comments and suggestions. Just write to: Nitrogen Division Allied Chemical, 40 Rector Street, New York 6, N. Y.



Enduring Nitrogen Expands Non-Farm Fertilizer Market

Don't fail to look now at the fertilizer market that is growing right in your backyard. It is in every backyard and front yard—around the homes, factories and other structures sprouting up along our streets and highways. It's hard to measure this market accurately, but there is no question it is growing faster than the farm market.

In 1938, the U.S. Department of Agriculture estimated non-farm fertilizer use at 250,000 tons. By 1957, the estimate is up to 2½ million tons, half of this being fertilizer for home lawns and grounds. By 1965, our 27 million home units are expected to grow into 35 million homes, with a corresponding increase in fertilizer use. We have all heard that the new Federal highway program will call for a million acres of roadside turf. Parks, playgrounds, golf courses and the like now occupy about 3 million acres, mostly turf. About 14 million acres of tended turf are now getting fertilizer, or need it. And we'll have more soon.

And around our million new homes a year, along our new highways, around our modern factories, and in our parks and playgrounds, we like to see grass, shrubs and trees. And we want them to look good, not tired and bedraggled. We are beginning to realize that fertilizer helps make plants attractive.

This is keeping the plant nurseries, lawn seed and sod producers busy. There is no reason it can't bring you fertilizer business too, at a good profit.

One big farm supply firm in the Northeast has been selling farm fertilizers for years to the home owners who have flocked to the outskirts of the towns. Now they have big garden centers catering to this trade. And the special fertilizers they make and sell are designed for turf, trees and shrubs.

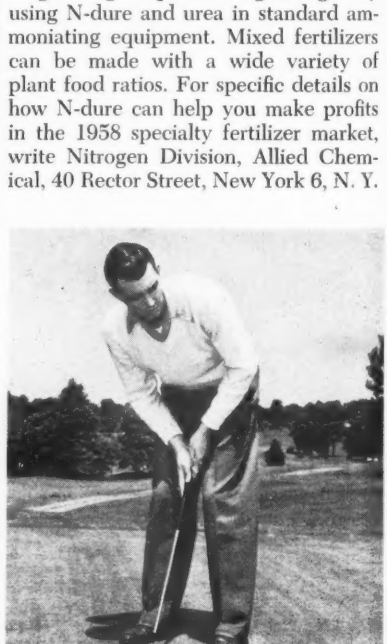
Over the years, fertilizer men have often talked about the wonderful market in farm pastures, if they could only get farmers to fertilize grass. Usually the fertilizer goes largely to cash crops. But grass around a home is different. Nowadays a new home costs money. The grass and shrubs and trees around it are expensive, too. Home owners are inclined to protect this investment and see it grow. They will use fertilizer to keep their plantings alive and to make them thrive. These customers need help in picking their fertilizers. Give them the right products—mainly mixed fertilizers high in nitrogen—and tell them to use enough, and you'll build satisfaction and repeat business.

When new turf is established, most of the experts recommend a 1-1-1 ratio or something close to it. For repeat applications, turf experts are recommending 2-1-1, 3-1-1, 4-1-2, 3-1-2, 3-2-1 and other high-nitrogen ratios.

In addition, the experts are advising that fertilizers for lawns and ornamentals contain a large proportion of slow-release or long-lasting forms of nitrogen such as ureaform. This allows the home owner to apply fertilizer only twice a year and still get fairly steady growth throughout the seasons. Fertilizers made with "N-dure" are ideal for this growing market.

Nitrogen Division research has perfected the combination of N-dure urea-formaldehyde solution and urea for manufacturing fertilizers that make nitrogen available to plants at a uniform rate for months. Manufacturers can use their standard ammoniating apparatus and can produce chemically controlled mixed fertilizer at economical cost. N-dure urea-formaldehyde solution, with additional urea, builds ureaform during the manufacturing process. This produces excellent semi-granular, non-segregating fertilizer. Formation of ureaform in the process of mixing also helps reduce danger of burning from other fertilizer salts as well as from nitrogen.

You can easily control the ratio of long-lasting to quick-acting nitrogen by using N-dure and urea in standard ammoniating equipment. Mixed fertilizers can be made with a wide variety of plant food ratios. For specific details on how N-dure can help you make profits in the 1958 specialty fertilizer market, write Nitrogen Division, Allied Chemical, 40 Rector Street, New York 6, N. Y.



Arcadian News for Fertilizer Manufacturers . . . . . from NITROGEN DIVISION

Technical Tips For Better Ammoniation

New nitrogen solutions now available for ammoniating superphosphate enable you to maintain excellent production schedules in the manufacture of high-quality fertilizers. However it is necessary to observe certain basic precautions in ammoniation.

The urge to hold output at too high a level can result in production losses rather than production gains. For example, overloading the mixer is a common cause of difficulty. It's better to stay within the capacity of the mixer.

Care should also be exercised in the selection of superphosphate for ammoniation. Coarse 4- to 6-mesh superphosphate is too large for complete ammoniation. 16-mesh and finer superphosphate assure better ammoniation and permit the use of a greater quantity of low cost solutions. Low moisture content makes it difficult for superphosphate to absorb desired amounts of ammonia.

Superphosphate will absorb more ammonia in the early stages of the ammoniation cycle than in the later stages. The charging rate should therefore be tapered off to prevent waste and assure complete reaction, in both batch mixers and continuous mixers.

With a 55-second ammoniation cycle in a batch mixer, the rate of adding solution should be gradually slowed down from 1 pound of ammonia per unit of P_2O_5 in the first 5 seconds to 1 pound of ammonia per unit of P_2O_5 in the last 10 seconds.

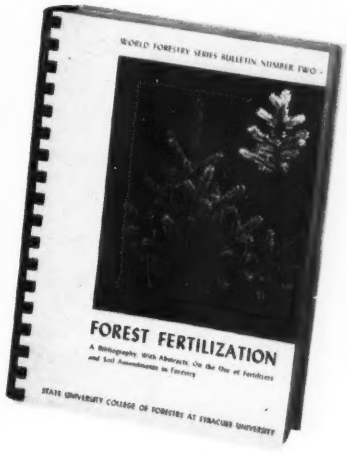
In addition to avoiding escape of nitrogen, this tapering-off technique also helps prevent reversion of phosphate to a non-available form, especially where high temperatures are involved. When reversion occurs, the fluorine tends to recombine as fluor-apatite, a form of phosphate with low availability to crops similar to rock phosphate before acidulation. When ammoniation is gradually tapered, the fluorine in the mixture tends to form desirable calcium fluoride instead of fluor-apatite.

The gauge is your guide to the flow of ammoniating solution into a batch mixer. For accurate control of this flow, it is important to keep the gauge glass clean and to maintain sufficient pressure in the tank to prevent gas bubbles in the gauge. To facilitate control in continuous mixers, meters must be kept in good working condition, free of dust and corrosion.

Ammoniation rates can be affected by the condition of the spray pipe that introduces solution into the mixer. Flow is reduced when orifices in the pipe become plugged. Flow is increased when orifices are enlarged by corrosion. Frequent checks are necessary. These can be made without opening the mixer for visual inspection. When the mixer is overhauled, or a new spray pipe is installed, simply take an accurate reading of the time and pressure required to deliver a standard charge of solution. Follow this with periodic readings, using the same pressure. If you note a change in time required for charging, examine the spray pipe. Stainless steel pipe is a real economy because it resists corrosion far better than mild steel.

Efficient ammoniation involves proper techniques, equipment and materials. Nitrogen Division, Allied Chemical, offers a complete line of nitrogen solutions from which you can select those best suited to your operating conditions. Nitrogen Division technical men are experts in ammoniation and have a thorough knowledge of fertilizer plant operation. Their service is free to customers. Contact Nitrogen Division, Allied Chemical, 40 Rector Street, New York 6, N. Y. Phone Hanover 2-7300.

Forest Fertilization Studies Summarized



A new technical book is now available which summarizes benefits of fertilizing trees and provides information that is helpful in determining the various tree fertilization markets.

Forest Fertilization, published by Syracuse University after two years of compiling information from forestry experts all over the world, is a bibliography, with abstracts, on the use of fertilizers and soil amendments in forestry.

This authoritative work is contained in one volume of 300 pages. Its 700 abstracts are clear and concise, and they cover all known test responses of trees to fertilizer from the year 1865 through 1956.

Tests described in the book include all important classifications and phases of tree production, such as natural forest stands and plantations, forest nurseries, and shade trees for landscaping.

The new book will save much repetition of work for anyone conducting experiments in tree fertilization, and will prove valuable as an information source to companies and individuals interested in this important fertilizer field.

Compilation of *Forest Fertilization* was sponsored by Nitrogen Division. Copies of the book can be obtained at $3 each from Director of Research, Nitrogen Division, Allied Chemical, 40 Rector Street, New York 6, N. Y.

HERE'S THE BIG LINE OF Arcadian® NITROGEN SOLUTIONS

When you purchase your nitrogen requirements from Nitrogen Division, Allied Chemical, you have many different nitrogen solutions from which to select those best suited to your ammoniation methods and equipment. You are served by America's leading producer of the most complete line of nitrogen products on the market. You get technical assistance and formulation advice from the largest and most efficient staff of nitrogen experts. You benefit from millions of tons of nitrogen experience and the enterprising research that originated and developed nitrogen solutions.

	CHEMICAL COMPOSITION %						PHYSICAL PROPERTIES		
	Total Nitrogen	Anhydrous Ammonia	Ammonium Nitrate	Urea	Water	Neutralizing Ammonia Per Unit of Total N (lbs.)	Approx. Sp. Grav. at 60°F	Approx. Vap. Press. at 104°F per Sq. In. Gauge	Approx. Temp. at Which Salt Begins to Crystallize °F
NITRANA®									
2	41.0	22.2	65.0	—	12.8	10.8	1.137	10	21
2M	44.0	23.8	69.8	—	6.4	10.8	1.147	18	26
3	41.0	26.3	55.5	—	18.2	12.8	1.079	17	-25
3M	44.0	28.0	60.0	—	12.0	12.7	1.083	25	-36
3MC	47.0	29.7	64.5	—	5.8	12.6	1.089	34	-30
4	37.0	16.6	66.8	—	16.6	8.9	1.188	1	56
4M	41.0	19.0	72.5	—	8.5	9.2	1.194	7	61
6	49.0	34.0	60.0	—	6.0	13.9	1.052	48	-52
7	45.0	25.3	69.2	—	5.5	11.2	1.134	22	1
URANA®									
10	44.4	24.5	56.0	10.0	9.5	11.0	1.108	22	-15
11	41.0	19.0	58.0	11.0	12.0	9.2	1.162	10	7
12	44.4	26.0	50.0	12.0	12.0	11.7	1.081	25	- 7
13	49.0	33.0	45.1	13.0	8.9	13.5	1.033	51	-17
15	44.0	28.0	40.0	15.0	17.0	12.7	1.052	29	1
U-A-S®									
A	45.4	36.8	—	32.5	30.7	16.2	0.925	57	16
B	45.3	30.6	—	43.1	26.3	13.5	0.972	48	46
Anhydrous Ammonia	82.2	99.9	—	—	—	24.3	0.618	211	—

Other ARCADIAN® Nitrogen Products: UREA 45 • A-N-L® Nitrogen Fertilizer Ammonium Nitrate • American Nitrate of Soda • Sulphate of Ammonia

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St. Paul 4, Minn., 45 N. Snelling Ave.....Midway 5-2864
San Francisco 4, Cal., 235 Montgomery St. Yukon 2-6840

Chemicals

329—CONDITIONING AGENT

The United States Graphite Co. welcomes inquiries on its "Graflow," conditioning agent for fertilizer. When added as an ingredient, in either pulverized or granular form, "Graflow" reduces wear and corrosion of mixing equipment, and increases flowability of the product, says the company. For further details,

CIRCLE 329 ON SERVICE CARD

330—CHEMICAL CONSULTATION

Diamond Alkali Co. announces that if you're looking for development cooperation, its technical staff will be glad to advise you. The company's insecticides and herbicides include DDT, BHC, Lindane, Grain Fumigants, Miticide K101 (Ovex), 2,4-D Weed Killers, 2,4,5-T Brush Killers, Hexachlorobenzene. Requests for information will be answered if you

CIRCLE 330 ON SERVICE CARD

331—NEW EMULSIFIER

A new vegetable-oil source liquid surfactant which may be used as a wetter-sticker adjunct for agricultural sprays has been developed by Sole Chemical Corp. The product, "Sole-Onic PGE," may be used as a wetter-sticker for field mixes of either water-soluble or oil emulsion pesticide formulations. For more details,

CIRCLE 331 ON SERVICE CARD

332—BUTADIENE MANUAL

Research chemists and others engaged in new product research or development will be interested in a new 52-page technical manual on butadiene by Texas-U.S. Chemical Company. This major raw material has possible application in the manufacture of pesticides.

Replete with illustrations, tables and graphs, the manual covers specifications, physical and chemical properties, describes 150 chemical reactions, has extensive indices on fields of end uses, reactants and reaction products and information on samples for experimentation. Copies of this booklet may be obtained by

CIRCLING 332 ON SERVICE CARD

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FREE INFORMATION to help you solve fertilizer, pesticide problems

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333—OLIN MATHIESON BOOKLET

A 16-page booklet containing information on organic, inorganic and specialty chemicals has been issued by the Industrial Chemicals Div. of Olin Mathieson Chemical Corp. For your copy of the pamphlet which describes the characteristics, grades and containers for 24 basic chemicals used by industry,

CIRCLE 333 ON SERVICE CARD

334—NATIONAL CARBON BULLETIN

National Carbon Co. has described its complete line of carbon and graphite products for the chemical processing and other industries in a four-page bulletin which lists the chemical and physical properties of its line. Copies may be obtained by

CIRCLING 334 ON SERVICE CARD

Process Equipt.

335—ROTARY PULVERIZER

Sturtevant Mill Co., which custom builds mixers, batching units, granulators, hopper and conveying systems, states that its rotary pulverizer is engineered to grind up to 35 tons of tailings per hour. The pulverizer also features "Open-Door" accessibility which makes cleaning quick and easy. For details on this and other Sturtevant products just

CIRCLE 335 ON SERVICE CARD

336—ELECTRONIC FEED CONTROL

Load Star Corp. has developed a device which maintains, within 5 per cent, a constant and unwavering 100 per cent flow of feed into pulverizers, hammermills, extractors, mixers, attrition mills, roller mills and other motor-driven processing machinery. For more details about the Load Star Feed Control,

CIRCLE 336 ON SERVICE CARD

337—NEW VALVE

The Tapered Orifice Valve (patent pending) has been developed by General-American Valve Co. for accurately controlling the flow of liquids and gasses. Its basic function is that of the needle valve, but it will pass foreign particles up to twenty times larger than comparable needle valves. More information is available. Just

CIRCLE 337 ON SERVICE CARD

338—HEAT EXCHANGERS

A new technical bulletin on the Impervite brand impervious graphite Tube and Shell heat exchangers has been published by Falls Industries, Inc. Standards, optional designs, and characteristics are discussed in the brochure which may be obtained by

CIRCLING 338 ON SERVICE CARD

339—LIQUID METERS

Descriptions of Rockwell liquid meters for measuring liquid propane, liquid butane and liquid propane-butane mixtures are now available in a new eight-page bulletin issued by Rockwell Manufacturing Co. The brochure features a two-page drawing-illustrated explanation of the over-all Rockwell dispensing system. For your copy

CIRCLE 339 ON SERVICE CARD

340—IMPROVED COUPLINGS

Link-Belt Co.'s complete line of improved geared flexible couplings has been described in a completely new 12-page publication. The brochure covers couplings with maximum bores ranging up to seven inches and ratings from 2½ to 572 horsepower per 100 r.p.m. It may be obtained by

CIRCLING 340 ON SERVICE CARD

341—V-BELT DRIVE BULLETIN

Dodge Manufacturing Corp. has compiled a comprehensive, illustrated V-belt drive manual containing all V-drive information previously available in its General Engineering Catalog. The 108-page book is geared to assist plant engineers and others with power transmission problems, and includes product and installation photographs, engineering drawings and tables. Indexed for convenient reference, the book may be obtained without charge by

CIRCLING 341 ON SERVICE CARD

Packaging

342—"PRINT-A-CAN" PRINTER

A portable printing device which prints labels, instructions and other matter on 5-gallon cans is being marketed by the Metal Products Div. of Chapman Chemical Co.

The Chapco Print-A-Can Printer will handle up to 500 cans per hour with one inexperienced operator. Operation of the machine is mechanical and the device will handle all types of 5-gallon cans whether bail and tite-head, with or without rolling hoop. The printing area is 9" x 14" and type as small as 10 point may be reproduced satisfactorily. Plates and colors may be changed in seconds. An accessory called the Chapco Print-A-Drum Printer is available for printing 30 and 55-gallon drums. For additional material,

CIRCLE 342 ON SERVICE CARD

343—SYNTHETASINE LINING

A leaflet describing synthetasine 300, a new lining manufactured by Synthetasine Protective Coating, Inc., has just been issued. The new product can be expected to resist alkali, detergents, dilute mineral acids, chlorinated solvents, formaldehyde (36–38 per cent aqueous), detergent combined with hydrocarbon solvent, fatty acid, emulsions, alcohols, aromatic and alaphatic hydrocarbons, oils and greases and food products. For a copy

CIRCLE 343 ON SERVICE CARD

Materials Handling

344—IMPROVED PAYLOADER

The Frank G. Hough Co. has announced that the new model HAH "Payloader" with the scarifer attachment does 100 manhour job in 30 minutes. Other features of the new model include 450 busket rollback at ground level; hydraulic load-shock-absorber; power-transfer differential; powerful breakout digging action; power-steering and hydraulic brakes. For more details, just

CIRCLE 344 ON SERVICE CARD

345—TRIPLE STAGE UPRIGHT

The Clark Equipment Co. has just released an eight-page fold-out brochure describing the specifications and operation of its new triple stage upright for fork trucks. The upright is a three-section telescoping device which raises high enough to permit ceiling-high stacking and retracts low enough to pass through boxcar doors. For a copy of the booklet

CIRCLE 345 ON SERVICE CARD

346—REPRINT DESCRIBES DUST COLLECTOR

A four-page reprint of an article describing a two-stage cyclone-and-precipitator dust collection system is being offered by Buell Engineering Co., Inc., which states that the system is 98.5 per cent efficient.

To secure a copy of the brochure explaining the installation and telling how each unit operates, just

CIRCLE 346 ON SERVICE CARD

Miscellaneous

347—CONVERSION CHART

Precision Equipment Co. has just published a new edition of its Wall Chart of Conversion Factors. Of value to engineers and other executives, the chart includes common conversions such as inches to centimeters or watts to H.P. as well as many conversions that are difficult to locate in reference manuals. For a copy of the chart just

CIRCLE 347 ON SERVICE CARD

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348—MILL AUTOMATION

"Automation in the Mill," a 12-page reprint of a technical report describing the latest digital printout techniques, is being offered by the Richardson Scale Co.

Illustrated with 12 photographs and four diagrams, the booklet is a design study of a specialized control problem and highlights the company's techniques for weight selection by potentiometer, servo supervision of feeder motors, digital computing for printout and totalizing, digital time indication and recording, and electrical sequencing and interlocking. For a copy just

CIRCLE 348 ON SERVICE CARD

349—MIXING OPERATIONS

Rietz Manufacturing Co. has prepared a four-page bulletin on mixing operations. The brochure, "Engineering Report on Mixing," covers mixing of solids with solids, solids with liquids, heating or cooling during mixing operations, and the mixing of high viscosity liquids for the production of plastic or pasty masses. For your copy

CIRCLE 349 ON SERVICE CARD

350—"SPEC" MASK

Acme Protection Co. has just issued a bulletin on its recently introduced "Spec" mask which is of value to gas mask users who must wear eye glasses under their masks. For your copy just

CIRCLE 350 ON SERVICE CARD

See page 49 for information on these Reader Service Numbers:

351—Gross Bagger **352—Fertilizer Spreader**

353—Plastic Fume Duct

THE MAN WITH THE ★ MULTIWALL PLAN

UNION PACKAGING SPECIALIST BLAINE LOUDIN

lowers a Multiwall user's overhead $37,584

66 minus 27 = 37,584. Loose logic? Not for a large agricultural chemicals' firm whose Multiwall Packaging and materials handling system was recently reviewed and revised by Union Packaging Specialist Blaine Loudin.

The 27 represents a reduction in the company's labor force from an original staff of 66. The 37,584 . . . seasonal dollar savings achieved following adoption of Union's recommendations for more efficient, economical operation.

Union Multiwall Recommendations are based on this 5-star Packaging Efficiency Plan

- DESIGN
- EQUIPMENT
- CONSTRUCTION
- SPECIFICATION CONTROL
- PLANT SURVEY

Among the new proposals: using a lateral bag conveyor for carloading. This improvement alone speeded handling and freed three men for other plant work.

The complete changeover was made using existing equipment and buildings with only slight modifications. Capital outlay expended by the company was paid back in less than 13 months.

This is a typical case of Union's 5-Star Packaging Efficiency Plan in action. Write for full information.

Better Multiwall performance through better planning

union camp

UNION'S PACKAGE ENGINEERING DEPARTMENT will study your Multiwall bagging methods and equipment and make appropriate recommendations, regardless of the brand of Multiwalls you are now using.

UNION MULTIWALL BAGS

UNION BAG-CAMP PAPER CORPORATION

233 BROADWAY, NEW YORK 7, N. Y.

AAFCO ELECTS NEW EXECUTIVES

Cloaninger, Weatherall, Quackenbush, Randle, Epps, and Patterson.

New officers and members of the Executive Committee of the Association of American Fertilizer Control Officials were elected during the group's annual meeting at the Shoreham Hotel, Washington, D. C., October 18.

J. J. Taylor (not shown on the photo) was elected president; F. W. Quackenbush, Indiana (third from left), vice president, and Bruce D. Cloaninger, Clemson (far left), secretary-treasurer. Others shown were elected to the Executive Committee: R. C. Wetherall, Montana; Stacy B. Randle, New Jersey; Ernest A. Epps, Louisiana, and the retiring president, J. D. Patterson, Oregon.

DATES SET FOR NW INDUSTRY CONFERENCE

The 1958 Northwest Agricultural Chemicals Industry Conference will be held in the Hotel Benson, Portland, Ore., January 22–23. The Western Agricultural Chemicals Assn. is sponsor of the meeting. On Wednesday afternoon, January 22, there will be an open meeting with the Northwest Vegetable Insect Conference.

Industry chairman for 1958 is George W. Coffman, Diamond Black Leaf Products.

Among the head table contingent at the dinner, Oct. 17, for the AAFCO sponsored by the National Plant Food Institute were F. W. Quackenbush; Dr. Russell Coleman, NPFI exec. vice pres.; Ervin L. Peterson, Asst. Sec. of Agr.; J. D. Patterson; Paul T. Truitt, NPFI exec. vice pres.; True D. Morse, Under Sec. of Agr.; Bruce D. Cloaninger; and Sigurd Anderson, Fed. Trade Commission member.

NITROGEN CONFERENCE SCHEDULED IN ST. PAUL

Importance of nitrogen fertilizers in Midwestern agriculture will be cited during a Nitrogen Conference Feb. 20–22 at the Lowry Hotel in St. Paul. In attendance will be representatives of the fertilizer industry and soils research men and extension specialists from the University of Minnesota.

Featured will be fertilizer research, role of nitrogen in crop production, soil nitrogen needs and relationship between nitrogen and other plant nutrients in maintaining soil fertility. There also will be a tour of the St. Paul Ammonia Products plant.

The conference is sponsored jointly by the Minnesota Fertilizer Industry committee of the Midwest Soil Improvement committee and the University of Minnesota.

ILLINOIS SPRAY OPERATORS SCHOOL

The 10th Illinois Spray Operators' School will be in session January 23 and 24 at the University of Illinois in Urbana.

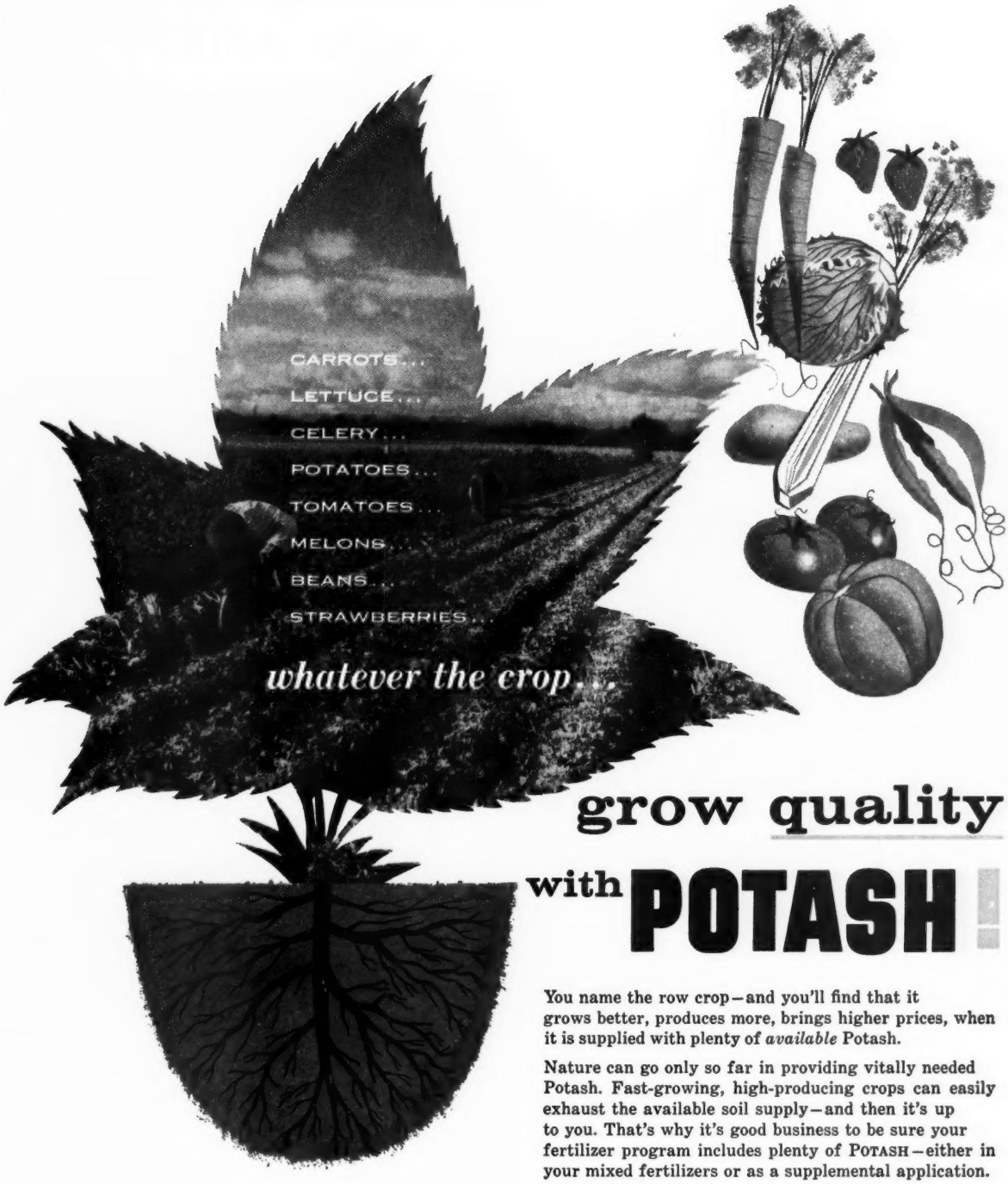
Subjects to be covered will include insect and weed control on field crops and equipment and application of liquid fertilizers.

A smoker is planned for Wednesday evening, January 22, to give those attending a chance to renew old acquaintances and make new ones.

COLO. AGR. CHEMICALS ASSN. TO MEET JAN. 30-31

This year the Colorado Agricultural Chemicals Association has increased the length of its annual meeting to two days. It will be held on January 30 and 31 at the Cosmopolitan Hotel in Denver.

W. D. Smith, association secretary-treasurer, looks forward to a larger and better meeting than ever before and hopes that attendance will surpass past records.



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Nature can go only so far in providing vitally needed Potash. Fast-growing, high-producing crops can easily exhaust the available soil supply—and then it's up to you. That's why it's good business to be sure your fertilizer program includes plenty of POTASH—either in your mixed fertilizers or as a supplemental application.

American Potash & Chemical Corporation is a basic supplier of Potash. Consult your fertilizer dealer today and be sure to specify plenty of TRONA® POTASH, *the vitally needed plant food.*

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Producers of: BORAX • POTASH • SODA ASH • SALT CAKE • LITHIUM • BROMINE • CHLORATES • PERCHLORATES • MANGANESE DIOXIDE • *and a diversified line of specialized agricultural and refrigerant chemicals.*

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FARM CHEMICALS

Associations & Meetings

ADDITIONS TO STAFF OF PLANT FOOD INSTITUTE

Dr. Russell Coleman, executive vice president of the National Plant Food Institute, has announced appointment of two more regional directors and a representative.

Dr. R. L. Beacher, professor, Department of Agronomy, University of Arkansas, will be Southwest regional director, with present headquarters at Fayetteville, Ark., effective Dec. 15. He joined the Agronomy Dept. at the University of Arkansas in 1949 as assistant professor in charge, soil testing laboratories, was promoted to associate professor in 1952 and professor in 1957.

Beacher

Dr. Samuel L. Tisdale, director, Soil Testing Div., North Carolina Dept. of Agriculture will take over the duties of Southeastern regional director on Dec. 15. At North Carolina State College he was assistant professor of agronomy from 1949 to 1952, associate professor of agronomy, 1953 to 1955 and professor of soils at the college and director of Soil Testing Div. since 1955.

Tisdale

Dr. Richard B. Bahme has been named a representative for the states of Arizona and California, with offices at San Francisco. At the time of his appointment he was manager of the Technical Development Dept. of Pacific Guano Co. at Berkeley.

Bahme

These appointments bring to five the number of field staff positions filled in connection with NPFI's expansion program. Appointment of Dr. W. H. Garman as Northeastern regional director and Zenas H. Beers as Midwest regional director were reported in the November FC.

FIVE POTASH CAMPANIES RETAIN NPFI MEMBERSHIP

FIVE potash companies have rescinded their action to withdraw from membership in the National Plant Food Institute, and a sixth potash producer is recommending retention of membership to the chief executives of the parent corporation, John A. Miller, Institute president, announced on November 29.

Potash companies retaining their membership in NPFI are American Potash & Chemical Corp., Duval Sulphur & Potash Co., National Potash Co., Potash Co. of America and Southwest Potash Corp.

An official of the sixth company, United States Potash Co. Div. of U. S. Borax & Chemical Corp., stated that recommendations are being made to chief executives of the parent corporation to retain membership in NPFI, with indications of favorable action anticipated.

These six firms tendered their resignations following the 1957 Institute convention when they disagreed on the dues structure approved by the NPFI board of directors for financing an expanded research and education program.

NSC FERTILIZER SECTION ELECTS NEW OFFICERS

George F. Dietz, safety director of Fertilizer Manufacturing Cooperative, Inc., was elected general chairman of the Fertilizer Section of the National Safety Council during the organization's meeting on Oct. 21–22, in Chicago.

Also elected were George L. Pelton, personnel manager, Smith Agricultural Chemical Co., vice chairman, and Elmer Perrine, technical representative, Nitrogen Div., Allied Chemical & Dye Corp., secretary.

AERIAL APPLICATORS MEET IN DALLAS

Sessions for aerial applicators were held Nov. 13–15 in Dallas, Tex., during the 18th annual convention of the National Aviation Trades Association.

On the opening day, during a general conference on safety, Charles Walker of CAA Region IV addressed the applicators. Representatives from USDA attended the group's morning meeting on Nov. 14 when "Government, Industry and Private Contract Operations" were discussed. Regulation was the topic of the afternoon session.

CHEMICAL CONTROL CONFERENCE

A special conference on chemical control work in fertilizer sponsored by the National Plant Food Institute recently at the Shoreham Hotel, Washington, D.C., drew an attendance of more than 100 persons representing the fertilizer industry, state fertilizer control officials, Government agencies and the trade and technical press.

NPFI's Chemical Control Committee: W. A. Morgan, DuPont; J. R. Archer, Int. Minerals & Chemical; H. L. Marshall, Olin Mathieson, Dr. Sauchelli; M. D. Saunders, Swift; W. J. Tucker, GLF Exchange and T. J. Bosman, Federal Chemical.

The program, which consisted of a number of technical papers, was planned by NPFI's Chemical Control Committee of which Dr. Vincent Sauchelli is chairman.

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NPFI reveals PLANS for the SOUTH

BY DR. RUSSELL COLEMAN

Executive Vice President
National Plant Food Institute

BEFORE we can convince farmers to use more fertilizers, our industry must be fully convinced that it should sell more fertilizer. A few members of our industry are so seriously worried about the agricultural surplus problem that they feel industry is doing our nation an injustice to sell more fertilizer. This point I should like to clarify in the outset. I am fully convinced and want to convince you that it is more important to continue to apply technological progress on the farm than it is to draw ourselves into a shell and worry about the surplus problem. Let us review briefly what efficient farming has meant to the consuming public during the period 1940–1950.

The Farmer Survey

Preliminary Results

1. **WHO influences the farmer in buying his fertilizer? The study seems to show in order of importance**
   a. State agricultural college personnel—especially soil testing analysts and county agricultural agents.
   b. Neighbors
   c. Dealers
   d. Others. This includes a large number of different types of people, including fertilizer salesmen.
2. **WHAT factors will influence the farmer? It appears that the following are most important:**
   a. Soil test recommendations
   b. Reasonable credit terms
   c. Demonstrations
   d. Mass media (especially state and regional)
3. **WHY don't farmers use fertilizer? Among the 30 per cent non-users the principal reasons seem to be:**
   a. Weather risks
   b. Not enough money
   c. Do not recognize need

According to Dr. Byron T. Shaw, if farmers farmed in 1950 as they did in 1940, the American housewife would pay ten billion dollars a year more for food. If we apply this principle to 1957, the savings in the consumer's food bill would undoubtedly be thirteen instead of ten billion dollars annually. Let's take a look at this ten billion dollar annual savings which the American farmer has passed on to the consumer because of his efficiency during the 1940–50 period and compare it with the cost of our agricultural program today.

All programs in the USDA are costing the American taxpayer about five billion dollars annually. To buy and store surplus agricultural commodities costs about two and a quarter billion dollars annually. The ten billion dollars which the consumer has saved because of improved farm efficiency will pay for twice the entire USDA annual appropriation.

Our Industry's Contributions

Now let's take a look at our own industry and its specific contributions. Conservative estimates by individuals in the Department of Agriculture show that the increasing usage of fertilizer since 1940 has saved the American housewife two of the ten billion dollars annually in her food bill. In other words, if fertilizers were being used today on the same limited basis as in 1940, even though other agricultural progress had been made, the American housewife would be paying two billion dollars a year more for her food items. This two billion dollar savings which the increased use of fertilizer alone has contributed to the American taxpayer since 1940 almost pays the entire cost of our agricultural surplus program.

Technological advancements in the fertilizer industry have brought the cost of plant food down. If plant food costs had advanced as much as other things he buys, the farmer's fertilizer bill today would be one and a quarter billion dollars more. This cost would have to be passed on to the consumer. This annual savings on the part of our industry represents a major contribution to our national welfare and shows that the fertilizer industry is in partnership with progress.

In the light of these facts, our industry is not only justified, it is obligated to sell more and more plant food so that the farmer's production cost can be cut and the consumer can enjoy cheaper foods.

The facts show that a tremendous potential for using more fertilizer exists in the South. The 1954 census shows that only 70 per cent of Southern farmers are using any fertilizer and that those are using an average of about one-half the amount recommended by agricultural experiment stations. Our staff in collaboration with others has determined the realistic potential for fertilizer usage in the South. Although the state agricultural authorities recommend more, our study shows a realistic potential of 86 per cent more fertilizer than is currently used in the Southland. This means that the fertilizer industry should be selling 7.8 million tons more in this area. We believe that this is not only a realistic figure but one that can be attained with a concerted

effort on the part of our industry working with other agencies.

Setting Reasonable Goals

How long will it take to increase fertilizer usage in the South by 86 per cent? That depends upon the effort which our industry makes. At the present rate of increase it will require about 50 years. We believe that this industry should set a reasonable goal for getting that amount used in the South. I am convinced that it can be done in a ten year period. Our principal job as an Institute and an industry is to develop this potential by speeding up the acceptance of proper fertilizer usage.

In an effort to determine what factors influence farmers to buy fertilizers, our Institute has recently contracted with National Analysts, Inc., to make a direct farmer survey.

The National Analysts study seems to point specifically to the state agricultural colleges and the services which they render as being the most important influential factors. In the light of this fact, it seems that NPFI's primary job is to create the most favorable relationship possible between industry and the state agricultural colleges. There is adequate evidence to prove that fertilizer properly used can contribute substantially toward increasing net farm income. Our industry must forge a stronger cooperative program with state agricultural colleges to get more fertilizer used to improve the farmer's position. Strong cooperative programs have already been developed between industry and a few state agricultural colleges with a resultant benefit to both groups. For example, in the State of Georgia the Agricultural College has developed a concentrated program to increase Georgia farm income by two hundred million dollars annually through the proper use of fertilizer. Despite a 10 per cent reduction in Georgia crop acreage in 1957, more fertilizer has been used this year than in 1956. This accomplishment is undoubtedly due to the joint efforts of industry and the college leadership.

The job of working with the state colleges must be done through regional and state offices. Our NPFI regional office for the Southeast will be in operation by January 1, 1958. We have selected outstanding leaders—Dr. S. L. Tisdale to direct the program for the Southeast and Dr. R. L. Beacher to direct the program in the Southwest. I am convinced that both will provide superb leadership.

Although we feel that our Institute's over-all course for the South is well charted, the program can be successful only if it is continually adapted to the needs of the area. In order to accomplish this objective, NPFI plans to set up an Industry Advisory Committee, composed of member representatives in this area. The committee will serve as a guide to make our program more useful and meaningful to you. ▲

Presented at the Second Annual Southeastern Fertilizer Conference, Atlanta, Ga., Oct. 31, 1957.

Seven Point Program

Suggested by National Analysts Study

1. **Support soil testing programs in the various states and work with state agencies to get better use of soil testing services and recommendations.**

2. **Lend NPFI's support to help the county agricultural agent do an even better job; help create a closer relationship between fertilizer salesmen, dealers and county agents.**

3. **Work more closely with local credit agencies, continuing to serve as a catalyst to bring a united credit program with bankers, state colleges and local industry all participating. Farmers need encouragement to borrow money to buy fertilizers.**

4. **Support carefully planned demonstrations in cooperation with state colleges, preferably with county agent. Such demonstrations should capitalize on the "neighbor influence" and should favorably affect both fertilizer users and nonusers.**

5. **Use testimonial type success stories as a basis for developing a more effective mass media program. This would be one means of reaching those farmers who do not consult with others about their fertilizer problems.**

6. **Continue research grant programs with state agricultural colleges, giving special attention to those projects which offer an opportunity for new fertilizer markets. A concentrated research program on forest fertilization is planned for the South.**

7. **Test on a research basis and in a concentrated area the techniques recommended by National Analysts to determine their effectiveness.**

Dr. S. L. Tisdale
Southeastern Dir.

Dr. R. L. Beacher
Southwestern Dir.

Discussions of sales, materials supply, 'Essential to Success' highlight program of the National

FERTILIZER SOLUTIONS

NEW slants to sales, materials handling, business management and solution additives were presented to more than 325 members of the National Fertilizer Solutions Association at their annual convention, November 17 to 19, at the Netherland-Hilton Hotel in Cincinnati, Ohio.

THE ART OF SELLING

Ralph Everett, Empire Sales Training Center, Buffalo, N. Y., keynoted the convention with "A Fistful of Future in Selling Fertilizer Solutions."

"In sales there is no middle ground. You either get the order or you don't, and it takes salesmanship to be successful," he remarked. In order to develop salesmanship to best advantage, the basic characteristics inherent in any prospective customer must first be realized.

He pointed out that people want to be sold, but there exists in them a trait of obstinacy. They say, in effect, "Show me, brother, and I might be interested." This trait presents a challenge . . . a challenge which can be met with a creative sales approach. When a salesman can show how his product will do something better for the prospect, chances are a sale has been made.

But a creative salesman isn't born, he's trained. Trained in the simple fundamentals of selling. These fundamentals are represented by four general principles:

Start Right to End Right—This principle points up the importance of good first impressions and concerns two factors: (a) A clean and neat appearance; and (b), a proper attitude.

Sell Concepts (ideas) and not just products.

Determine the Problems and Needs of the Prospect. Then build a solid sales presentation around them.

Find Out What Will Motivate a Prospect to Buy. Is it comfort, security, prestige, profit? When you have learned which motive appeals most strongly to the prospect, be certain to include it in the sales presentation.

The race of a front-running salesman involves the following quarter poles. First, get the prospect interested. Second, give a well-planned presentation. Third, anticipate and meet objections to buying. And fourth, ask for the order.

MATERIAL SUPPLY OUTLOOK

An essential follow-up of any sale is having a product to deliver. This involves the proper management of material supply. In order to provide association members with a better insight into material supply problems, three men, authorities in their respective industries, were called upon for reports of consumption and forecasts of availability of nitrogen, phosphoric acid and potash.

Nitrogen

H. H. Tucker, Sohio Chemical Company, presented the nitrogen materials outlook for 1958, 1959 and 1960. Of particular interest to the fertilizer solutions industry is the production capacity for urea. Urea has proven itself to be of great value in nitrogen solutions for direct application and in producing complete liquid fertilizers with highest concentration and lowest salting out temperatures. Estimates of urea end usage in 1958 showed a 20 per cent increase over that of 1956. This indicates a possibility of short supply similar to the 1957 problem. However, with the operation of several new urea plants planned for late 1958, the supply shortage is expected to ease somewhat in 1959 and 1960.

Phosphoric Acid

Discussing phosphoric acid, W. R. Bone, Monsanto Chemical Company, reported no problem is expected with regard to the supply of elemental phosphorus—or in conversion. The one inevitable problem is that of seasonal peaks and their inherent transportation and storage demands. One approach having merit is mutual consideration of the manufacturer and supplier, with each one's interests firmly in mind. At best, the problem will not be answered over-night.

Potash

The potash outlook was given by Dean Gidney of United States Potash Company, who stressed the importance of viewing potash availability from a world-wide standpoint. Because potash is widely produced throughout the world, any temporary shortage in one area might be readily eased by increased imports to that area. However, the United States does not show signs of any immediate shortage. Domestic production of potash is now in good balance with demand, but any small increase in demand would quickly throw supply out of balance. In the event of such a development, it is believed that domestic production could be increased, but only if the increased production could be accomplished economically.

Summary

The over-all prospects for fertilizer consumption

S CONVENTION

are good, for estimated increased population and decreased acres in production tend to increase the importance of fertilizer usage. There are, however, current seasonal transportation and storage problems. In most cases these problems can be approached from the "as-it-arises" standpoint.

A key to effective promotion of fertilizer usage is a properly conducted educational meeting. Howard R. Lathrope, agronomist, Nitrogen Division, Allied Chemical & Dye Corporation, outlined the steps leading to a successful meeting.

First, publicize the topic of discussion and emphasize its importance to a profitable farming operation.

Second, maintain a register showing the names of everyone attending. Valuable contacts and sales prospects can be developed from it.

Third, be certain that discussion topics make possible the use of visual aids.

And fourth, summarize. Be sure not to leave anything to chance.

Proper employment of these four aspects will assist in assuring successful educational meetings.

ESSENTIALS TO SUCCESS

A panel of three experts were called upon to contribute ideas regarding essentials to success . . . ideas that they have derived from careful study and experience with the subject.

Business Management

Dr. John K. Pfahl, Ohio State University, briefly showed the way to successful business management as it pertains to finances. He listed four areas of financial management which, when properly understood, will aid in a more practical realization of business aims. These are accounting, capital, credit and profits.

Selling a Fertility Program

Dr. Gordon Ryder, extension entomologist, Ohio State University, offered some enlightening facts which fertilizer manufacturers can use to good advantage. He stated that competition between Ohio fertilizer manufacturers is keen; and, even so, the number of plants is increasing steadily. However, there is one very important factor which is a potential sales tool. If used properly, this tool will broaden the fertilizer market and stimulate greater consumption. It concerns the ratio between the amount of plant food actually being used and the amount which is recommended by state extension services. Only 42 per cent of the recommended quantity of nitrogen, 42 per cent of phosphoric acid and 48 per cent of potash is actually being applied by the Ohio farmer.

It becomes evident that an upswing in sales will result from presenting the farmer with a sound fertility program. Learn what fertility level is recommended by your state and sell accordingly.

Marketing Fertilizer

Dr. John W. Sharp, Ohio State University, pointed out that there are three duties involved in the marketing function: Planning, direction and control.

The successful manager gathers market information and uses it to formulate plans. Next, he directs his personnel in the best way to carry out these plans. And finally, he supervises (controls) the "carrying out" in order to insure its success.

NFSA ORGANIZATION

After a board of directors meeting that was held November 17, the following list represents the 1958 officers and directors of the National Fertilizer Solutions Association:

President: Richard Cecil, Bartlett & O'Brien Fertilizer Co.; Vice-President: William B. Parrish, Auburn, Ill.; Secretary: George Serviss, G.L.F. Exchange; Executive Secretary: Muriel F. Collie, Chicago, Ill. and Treasurer: John L. Wilson, Semo Liquid Fertilizers, Inc.

Board of directors: W. R. Bone, Monsanto Chemical Co.; Richard Cecil; C. B. Coleman, Fabricated Metals, Inc.; E. E. Crouse, E. E. Crouse Soil Service; Donald A. Fletcher, Pacific Supply Cooperative; Don Foster, Don Foster Nitrogen Solutions; Ernest M. Harper, Allied Chemical & Dye Corp.; Wayne R. Johnson, Johnson Bros. Mills, Inc.; O. L. Ohnstad, Ohio Liquid Fertilizer, Inc.; William B. Parrish; W. Harold Schelm, Schelm Bros., Inc.; George H. Serviss; Hugh S. Surles, Jr., Planters Cotton Oil & Fertilizer Co.; F. Todd Tremblay, Washington Coop. Farmers Assn.; Donald R. Weber, Spraying Systems Co.; John White, Farmers Fertilizer Co. and John L. Wilson.

A report of the Standards Committee announced that during 1958 three sub-committees will be set up to study (1) application equipment, (2) tanks, and (3) corrosion. They will mail questionnaires to association members, and report their findings prior to the 1958 convention.

Walter Scholl, USDA, announced that a study is being planned that will determine what portion of the 22½ billion ton fertilizer industry the liquid fertilizer market represents.

A GIANT SLEEPS

A prodigious giant is just now beginning to stir, according to Minita Westcott. It needs a little prodding, a little shaking, but it has all the signs of a gargantuan being, if and when it becomes fully awake. This giant is the fertilizer solutions industry. And the prodding is being done by association members who are unselfishly giving their time and efforts to the job of continuing the industry's growth. This job is not only for just a handful of people, rather it's the job of every member in the industry. ▲

RIGHT: Russell Pisle, Sohio Chem.; Lee Hays, The Texas Co.

BELOW: W. P. Glaspey, Blue Valley Fertilizer Co., chats with A. M. Horehled of Sinclair Chemical Co. at the meeting.

Werner L. Nelson, American Potash Institute; Warren C. Huff, Ashcraft-Wilkinson Co., and Herb Garrard, Am. Potash Inst.

Kaspar Peter, Phillips Petroleum; Chet Johnson, Land O'Lakes.

MWSIC MEETS

Votes to combine with Plant Food Institute

AT ITS annual meeting in the Hotel Sherman, Chicago, members of the Middle West Soil Improvement Committee adopted a plan to consolidate MWSIC activities with the National Plant Food Institute. (A story from NPFI on the merger appeared in FC Nov., page 54).

Richard E. Bennett of Omaha, Neb., president of MWSIC, sounded the gavel opening the annual meeting at 9:30 a.m., Thursday, Oct. 31.

The program included reports by L. E. Quiram, MWSIC treasurer, and G. H. Kingsbury, chairman of the audit committee.

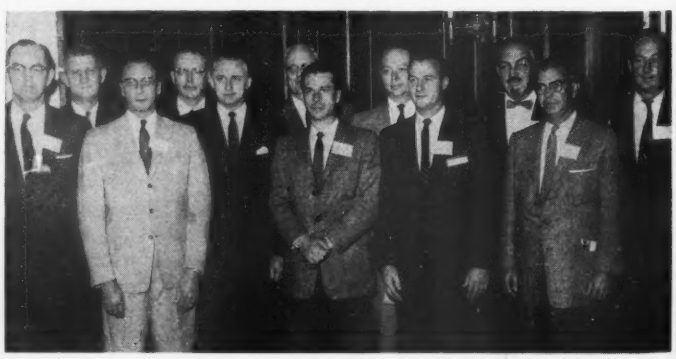
Z. H. Beers, executive secretary, summarized results of the committee's educational activities during the 1956–57 fiscal year. He outlined a new state-by-state program stressing the crop-producing potentials from soils in the MWSIC area.

At an afternoon session, Charles E. Trunkey, assistant secretary, reported on the committee's visual aids program, showing examples of representative filmstrips, illustrated folders, wall charts, booklets, etc. Altogether, 22 different educational aids are available to MWSIC members for use with farmer groups, dealers, county agents and vo-ag teachers, Trunkey said. ▲

Z. H. Beers reports on the group's educational activities.

R. E. Bennett, president, presides at the annual meeting.

Officers and directors of the Committee (left to right) Z. H. Beers, executive secretary; E. T. Potterson; Merle Blue; C. F. Martin; Louis Quiram, treasurer; R. E. Bennett, president; R. A. Garn; J. D. Stewart, Jr.; Frank Nelson; W. W. Venable; R. G. Fitzgerald, vice pres.; and Marshall Smith. A. C. Norris, not pictured.



New Farm Policy and Future Markets

By John Harms

DESPITE the billions of public funds spent and lent to control farm production this year, total 1957 output will break all existing records. This fact is loaded with significance to all industries selling the farm market—including the farm chemicals industry.

Record production this year emphasizes sharply the total bankruptcy of present farm policy to deal with modern farm technology. It leaves no doubt that major revision in current farm programs is inevitable. Leading farm economists say that "modernization" of farm policies *must* come for the nation's economic good, regardless of political considerations.

The question industry's planners must ask sooner or later is: How will new farm policy affect future markets? There is little argument that past farm programs have made a contribution to expansion of sales to farms. Can we count on similar activity in the years ahead?

Direct answers to these crucial questions are not available at this point, simply because the changes must be made by Congress. Because of the politics involved, it is impossible at this point to forecast. You can, however, examine the major proposals already publicized to see where industry's interest *may* lie.

The only plan that has been most publicized, and which, at this point at least, must be given the most careful attention, is the program outlined by Secretary of Agriculture Ezra Taft Benson. Because it has Administration backing, it is conceded the Number 1 contender in Congress this winter.

The Benson proposal would, in general, reduce price supports to levels which would result in farm commodities moving into commercial channels rather than into government storage. Price supports would be used primarily as "disaster insurance," that is, to prevent commodity prices from collapsing. A recent USDA study indicates that supports would have to be at levels reflecting 60 per cent of parity or slightly less in order for the "open" market to absorb all farm production.

From the industry standpoint, as well as from the farm point of view, the crucial issue is what this proposal would do in terms of spendable farm income. To the time of writing, the Agriculture Department has failed to come up with specific projections on the effect of farm income.

Public statements have been limited to general forecasts that the first several years would be "difficult" ones for the farmers—but that in later years benefits would be greater than under the present program.

The probable effect on farm income, and hence on farm spending for farm production needs, is, however, available from a strictly non-partisan source. A study of the problem was made by Dr. Walter Wilcox, senior agricultural economist for the Legislative Reference Bureau, Library of Congress. Wilcox owes his allegiance to the Congress as a whole, thus is considered to be apart from the political pressures that control statements of government-employed economists.

Dr. Wilcox says:

Net farm income will decline 20 per cent to 25 per cent from current levels—if price supports are lowered to levels that would permit all current production to move through commercial markets. In terms of cash, this means a reduction of $2 to $3 billion in net income during the first years of the program.

Major cuts in income would probably go like this, according to Wilcox: Wheat growers would take the brunt of the reduction, with a crop-value decline of about $1 billion—from $2 billion as the present annual value of the wheat crop, to about $1 billion. Cotton growers' income would drop from $2.1 billion to about $1.7 billion. Dairy income would drop about $300 million. Feed grain income also would drop, but the impact would not be felt for some time, since their prices now are at about 60 per cent of parity.

Here are excerpts of a recent Wilcox speech inserted in the Congressional Record by Senator Frank Carlson, Republican of Kansas:

"Returns to all labor and management in agriculture has varied from 65 to 80 cents an hour in the past 4 years. Except for the removal of $2 to $3 billion of farm products from commercial markets each year by price-support activities, it is estimated that returns would have varied from 46 to 59 cents an hour.

(Continued on page 53)

Fertilizer Industry Round Table

A $64,000 QUESTION could have been answered at the Round Table Conference held in the Sheraton-Park Hotel, Washington, D. C., on November 6th, 7th and 8th, provided it was on the subject of fertilizers. It would be hard to believe that there was ever a meeting held of a greater number of technical men on fertilizers at one place at the same time. It was a three-day question and answer session, and no questions went unanswered. There was always someone in the room who was willing to give his experiences on any given subject.

The meeting was conducted in five half-day periods and each period was devoted to a general subject. The fertilizer industry membership was canvassed last March for questions that would deal with general subjects on the manufacturing of plant foods.

After all the returns were in, it developed that one hundred questions were submitted, of which eighty-eight were selected for the Washington meeting; and each person called on to answer a specific question was given not more than five minutes for his reply, which considerably speeded the action for the entire meeting. The questions selected were assigned to various individuals who were known to be experts or had wide experience in the field covered by the question.

The Round Table was originated to afford an opportunity for operating personnel and equipment manufacturers to exchange ideas and to discuss mutual problems. This general theme has been preserved through the years in spite of pressures from other groups. The number attending the conference has doubled and re-doubled a number of times. Registration is now 260 persons, coming from all parts of the United States, Canada, Cuba and as far away as the British Isles.

Dr. Vincent Sauchelli, now with the National Plant Food Institute, Washington, D. C., opened the meeting with a few remarks, among which he said that today there is less hush-hush in the industry than ever before, and this seems to be a prevalent trend as time goes on.

RAW MATERIALS

The first half-day session concerned raw materials, and among the questions discussed were a great many dealing with particle size and its affect on granulation. It was brought out that particle size of the water soluble salts was not as important as it was with the water insoluble chemicals. The latter should always be fine. One suggestion concerning superphosphate was that it should be half the particle size of the finished fertilizer granule.

There were many questions concerning diammonium phosphate, generally referred to as DAP. Due to its present high cost, the use of the material is confined to high analysis goods and generally in

HOW IT BEGAN

Underlying objective and fundamental reason for the existence of the Fertilizer Industry Round Table is for informal, free and unbridled exchange of technical facts and information related to fertilizer production, processes and equipment. It is the intention of the Round Table to remain informal, unsponsored and afford all the opportunity to obtain any helpful information needed without being beholden to anyone.

Membership comprises production supervisors, presidents, vice presidents and managers of small plants; technicians, engineers, raw materials producers, machinery producers and bag manufacturers. All participate via questions, answers and short, informal papers supplying factual information. Only sales talks are taboo.

HISTORY

Historically, the Round Table started in 1951 when 19 men met for an evening in New York to discuss sampling and the flame photometer. In 1952 at Atlantic City, N. J., a larger group continued the same type of discussion.

The turning point came at Chicago during 1953, when the Round Table was given the impetus which established the worth of its objectives. The subject was surfactants, and the two and a half day discussion exposed to users for their own decision the many claims and counterclaims for surfactants. In 1954 in New York, a day and a half was spent reviewing new processes and new machinery.

These first four meetings were held as an extra

small plants long distances from sources of phosphoric acid. Several operators indicated they had successfully used DAP in amounts of 60–400 lbs. per ton in such grades as 12-12-12, 10-20-20, 15-15-15, 6-24-24 and others. Most of the DAP used has been of the crystalline type. One disadvantage of this material is that it will release some ammonia when raised to the proper granulating temperatures. It has also been observed that in some formulations there is a tendency to break down in the pile. This can be minimized by premixing the DAP with the superphosphate. Calcined dolomite is a good conditioner for use with DAP, but it doesn't work with ammonium nitrate.

Another relatively new material which was discussed at some length was ureaform. A combination of urea and formaldehyde with a fairly high nitrogen content, its chief advantage is its ability to release nitrogen slowly over a long period of time. Present high cost of the material relegates its use to specialty fertilizers. The one difficulty with ureaform is that temperature and moisture have a great effect on the reaction between the urea and formaldehyde and thus determines its activity index, a measure of its usable nitrogen content. When attempting to ammoniate in the presence of ureaform, temperatures must be kept below 125° F. and moisture held to 2 per cent or below in order to have the least effect on the activity index.

AMMONIATION

Ammoniation, topic of the morning session November 7, appeared to stimulate a great deal of interest and considerable discussion. There seemed to be general agreement that the physical properties of superphosphate had more effect on its ammonia retention than its chemical properties. Some of these properties were particle size, moisture content and porosity. It would appear that most operators consider that you can expect each unit of P_2O_5 to absorb 3 to 4 pounds of ammonia when the source is triple superphosphate and 5 to 6 pounds of ammonia per unit of P_2O_5 from normal superphosphate. The ammonia absorption for either type of phosphoric acid is quite specific at 7.2 pounds of ammonia per unit of P_2O_5.

Loss of nitrogen from mixed fertilizer is almost entirely confined to the ammonia. These losses can usually be minimized by controlling temperature, not overammoniating, not using excessive amounts of acid and not allowing dryer temperatures to go too high. *(Continued on page 48)*

AN**D GREW**

activity of the American Chemical Society conventions but were not recognized as a part of the program of that body.

When attendance climbed from 19 to about 150 it was realized that the Round Table could be held as a fall meeting without being allied with any other group. Accordingly, in 1955, 1956 and 1957 meetings were held in Washington, and attendance increased to more than 275. The format of the 1955 and 1956 meetings followed the idea of presenting facts of new processes, phases of present processes and machinery design and operating characteristics. In 1957 the Round Table called upon its membership to supply questions they would like to have answered. The 88 selected were assigned to qualified workers to answer at the meeting. The result of that effort is now history.

When the Round Table began holding separate meetings, it became necessary to charge a nominal registration fee to support the contact work with membership. An industry publication supplied the short discourses given in 1955 and 1956 as Proceedings, which were mailed to all members on the mailing list. In 1957 the Round Table aspires to publish its own proceedings, and distribute them to all persons who have attended meetings in 1956 and 1957. The registration fee covers this cost as well. The 1957 Proceedings, which will contain all the questions and answers plus those from the floor, should be a useful aid to the industry.

H. L. Marshall and Dr. V. Sauchelli

ORGANIZERS

Who did it and how? The idea is foster child of Vincent Sauchelli, and Housden L. Marshall aided and abetted him. Program planning was done by phone, each doing his part in getting participants and making meeting plans. In 1956 the work became so great that Joseph E. Reynolds, Jr., was pressed into service. By motion these three were designated as the Executive Committee and embarked on the 1957 Program. Since the work was extra on the part of all concerned, and the response so large, Albert Spillman was drafted to help. These four men have been designated the Executive Committee for the next two years.

articles and authors

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A new promotion approach:
Selling technical information
to consumers aids in

Selling Garden Chemicals

By Howard A. Weibel, Manager
Garden Chemicals Section
DuPont Grasselli Chemicals Dept.

DURING the 10 years we have been selling garden chemicals for home use, we have continually faced one outstanding problem: We are offering technical products to non-technical people. The tremendous post-war boom in home ownership has made our market for us. People invest money and hope in flower gardens, lawns, vegetables and ornamental plantings, and then come to garden dealers in despair because some kind of bug or "little brown spots" are ruining their dream of beautiful surroundings for outdoor living.

There are several hundred different formulations of garden chemicals, excluding fertilizers, on the market today. Our own line now totals 28 different chemical products, and we have some top quality competition.

Even specialty garden centers have had difficulty keeping sales people informed on the almost infinite variations in chemicals for home gardening. In stores where garden supplies represent only one counter or one department in widely diversified stock, it is almost hopeless to expect to provide sales people with enough technical knowledge so they can advise customers adequately. Yet our market surveys show that over half the customer decisions to buy one of our products resulted from the sales persons' advice, in the store, rather than from any other kind of motivation.

If we are to increase our rate of growth in this market, we must relieve the dealer of some of the burden of technical advice. In recent years, the trend in garden merchandising has been to increase local promotion efforts—newspaper advertising, both individual and cooperative; point-of-purchase material of all kinds; radio and television promotion, and other methods—all based essentially on the general motivations which have been found to make people buy consumer goods. This has been accepted as a big help to dealers in building retail sales, but dealers are less impressed than they used to be by the "look at the local promotion we're doing" approach. The success of such a program merely adds to the dealers' technical service problem.

For 1958, we are adding an entirely new promotion approach in addition to continuing traditional local advertising. We are selling with technical information directly to the consumer, so that when he comes into the dealer's store, he will already know the names of the products he needs to solve his garden problem.

What we are attempting to accomplish with this program is

▸ To increase dealers' interest in handling our garden chemicals by relieving him of some of the technical service burden.

▸ To increase acceptance of our line of garden chemicals by meeting the customer's need as he sees it, and providing enough information so he will get satisfactory results.

We are aiming for the gardener who recognizes that he needs some technical information, and offering it to him in a form that will be easy to absorb and easy to refer to later. The keystone of this program is an eightpage, four-color garden clinic guide—a handbook of pest control prescriptions. For all major insects, plant diseases and weeds it says: "If you have this bug on a particular plant, you use this material." Pictures of the pests make identification relatively easy.

The idea of technical information is not new, and neither is the idea of a booklet. What we are pioneering can be viewed from three aspects:

1. Technical information related directly to commercial chemical products.

2. Sure-fire distribution of the informative booklet to people whom we know are potential customers, in a way that will make them appreciate it, keep it and use it.

3. A substantial effort to let dealers know how DuPont is attempting to relieve them of the technical information burden.

For distribution we have selected two methods:

▸ The booklet will be run as an eight-page insert in a

garden magazine which has audited circulation concentrated in our distribution areas showing that 92 per cent of its readers are home owners with gardens. This is believed to be the most space ever taken at one time in the history of sales and advertising to provide strictly technical information to potential garden customers.

▶ An additional quantity of booklets will be made available to our dealers for distribution to their customers.

To tell dealers about this service, a trade paper advertising campaign will be conducted in winter and early spring. In addition, our salesmen are informing jobbers and dealers about the program and we are conducting an intensive direct mail campaign to our dealers and prospects, including advance mailing of the magazine.

Direct subscription distribution of the magazine, plus the normal volume of extra April issue sales through newsstands and garden stores, will put our guide in the hands of over half a million individual home gardeners. Distribution of the guide by dealers to their special customers will place it with another 250,000—providing a strong impetus to repeat sales. Special mailings to dealer lists assembled by both DuPont and the magazine's merchandising department will reach virtually all of the important garden supply dealers in our distribution area.

We view this as a means of putting understandable technical information about our products directly into the hands of a large proportion of gardeners and prospects in our distribution area. We are supporting the effort with direct messages to enough dealers so that customers should find our merchandise amply stocked in their area. ▲

INDUSTRY ROUND TABLE

(Continued from page 43)

Solutions containing urea seem to tend toward the formation of smaller, softer granules resulting in some breakdown of the granules in storage.

The use of sulfuric acid seemed to give the best all around results in granulation. Phosphoric acid of both types is being used successfully, but it seems to work best in high nitrogen mixtures. Phosphoric acid is harder to handle but does cut down on the fume problem materially.

At least seven criteria determine when a plant is producing granular grades at optimum efficiency:

1. *Using maximum amounts of solution possible*, consistent with good formulation and the production of a product of good physical condition and appearance.

2. *Keeping acid usage within bounds*, bearing in mind that acid added above that required raises the cost without contributing to the value of the product.

3. *Keeping recycle at the very minimum* consistent with good formulation and keeping the final product acceptable. It costs money to granulate. Therefore, the more acceptable product produced in the first pass through the equipment, the more economical the production will be.

4. *Controlling oversize.* The milling of oversize is a problem and a real bottleneck. Allowing it to get out of hand results in costly down time.

5. *Watching the moisture* in the finished product. Keeping it at 1½ per cent or below results in a product with good physical properties.

6. *Keeping tabs on the analysis.* Underformulation is cheating your customers; overformulation is cheating yourself.

7. *Classifying the finished product.* The fines should be removed and the product should not contain oversize that will cause trouble in the users distributing equipment. Going to extremes merely adds to the cost and does nothing to benefit the ultimate consumer.

FINAL SESSIONS

The remaining two half-day sessions on November 8 were devoted to miscellaneous discussions covering such fields as plant maintenance, fume and dust control, instrumentation and condition of mixed goods.

The fertilizer industry has always had a reputation for being exceptionally tough on metals or construction materials of any kind. Now that granulation has come into the picture conditions are even worse.

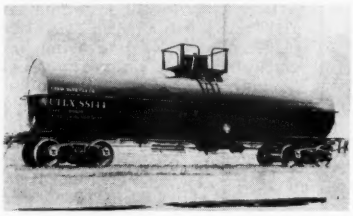
Perhaps the toughest assignment for any material, metal or otherwise, is that of being an acid sparger in a TVA ammoniator. Here a material must resist extreme corrosion, high abrasion and be strong enough to overcome the physical pressure of a ton or more of fertilizer material jammed against it by the turning action of the drum. Discussion of this subject brought to light that a number of materials have been tried with varying success. Ordinary black iron will last from two days to two weeks. Stainless steel 316 and Carpenter 20 are only slightly better than black iron. A black iron pipe coated with polyvinyl chloride, a plastic, is in the trial stage and at this time looks very good. Several reports on the use of Hastoloy C indicated that it would last at least a year.

PLANS FOR NEXT YEAR

During the business meeting, the group was asked where they would prefer to hold a meeting next year and it was unanimous that they should settle on Washington. The dates will be October 29th, 30th and 31st, at the Park-Sheraton Hotel. Theme for next year will be maintenance and equipment, including such subjects as air affluence, material handling and the economics of fertilizer manufacturing.

The group also voted on the officers for the coming year to head up the Fertilizer Industry Round Table, and they again elected as chairman Dr. Vincent Sauchelli, National Plant Food Institute, Washington, D. C.; secretary and treasurer, Dr. H. L. Marshall, Olin Mathieson Chemical Corporation, Baltimore, Md.; vice-chairmen, Joe Reynolds, Davison Chemical Company, Baltimore, Md., and A. Spillman, Fertilizer Manufacturing Cooperative, Baltimore, Md. ▲

UNION TANK MAKES 300th 'HOT DOG' TANK CAR

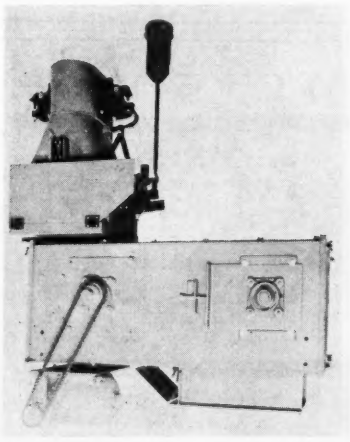


The new "Hot-Dog" design developed by Union Tank Car Co. eliminates the need for the conventional underframe, the company reports. Production of its 300th HD tank car, an insulated pressure car used to carry anhydrous ammonia, was completed recently.

The "Hot Dog" design also can be used for general purpose tank cars, acid cars and other low pressure cars.

GROSS BAGGER HANDLES 6 BAGS PER MINUTE

A belt-fed gross bagger with completely automatic cut-off has been announced by Richardson Scale Co. Called the Model GA-17, the new unit requires headroom of only 3'–11".

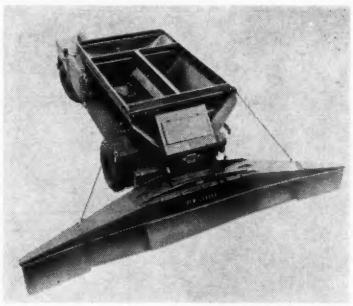


Designed for use with open mouth textile and multiwall paper bags, in sizes from 10 lb. to 140 lb. capacity, the GA-17 rapidly feeds the material from overhead supply bin directly into the empty bag, so that a speed of up to six or more bags per minute can easily be achieved, says Richardson.

For additional information

CIRCLE 351 ON SERVICE CARD

NEW FERTILIZER SPREADER ANNOUNCED



Highway Equipment Co. reports it has another new model, the "New Leader 3 Material Spreader." It accurately spreads nitrogen, phosphate and potash in the proper proportions as determined by soil analysis, the manufacturer reports.

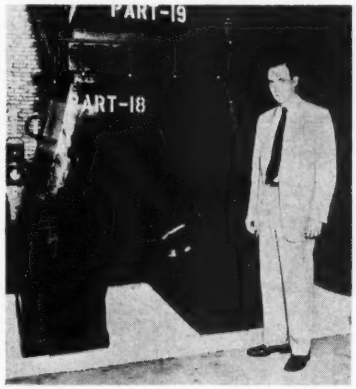
The spreader hopper is divided into separate compartments for three different fertilizers. A 36" wide heavy-duty 4-ply belt over a chain conveyor carries the fertilizer back to the cross augers at the rear of the machine. Each plant food is conveyed back on a separate section of the 36" belt.

For additional information,

CIRCLE 352 ON SERVICE CARD

GIANT FUME DUCT MADE OF PLASTIC

One section of a giant fume duct system made entirely of plastic by Haveg Industries, Inc., is shown below. This entrance hood 7 feet high with 6 foot throat section is fabricated entirely from acid digested asbestos filled phenolic



resin plastic. Among the advantages claimed for this material are high strength and rigidity, plus high resistance to chemical corrosion.

The manufacturer reports that initial cost is justified and maintenance costs are essentially nil.

For more information,

CIRCLE 353 ON SERVICE CARD

Suppliers' Briefs

Joy Manufacturing Co. has elected William L. Wearly president to succeed John Lawrence who has resigned. A. B. Drastrup will fill Wearly's former post of executive vice president.

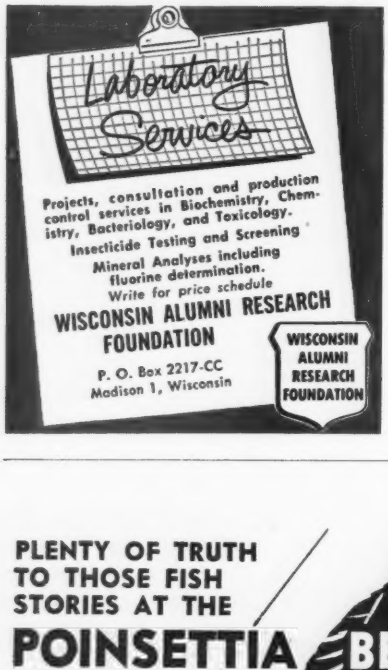
International Paper Co.'s board of directors elected Lamar M. Fearing and William S. Snyder company vice presidents. The two officers, who have served as assistant general sales managers since 1954, will continue in that capacity.

The Sturtevant Mill Co. has named George P. Towle, former vice president and general manager, to the presidency of the company. Towle succeeds William T. Doyle who becomes chairman of the board of directors. Clayton F. English, former

SUPPLIERS BRIEFS

production manager, assumes the post of executive vice president. Joseph L. Sturtevant remains treasurer.

Union Bag—Camp Paper Corp. has appointed William T. Bess, Jr. as assistant to the president. Bess, who has been with the company since 1950, has been serving as assistant director of multiwall bag sales.



CLASSIFIED ADVERTISING

RATES . . .

Effective July 1, 1957

Help wanted, positions wanted, used machinery and business opportunities are now charged at only 15 cents per word, $2.50 minimum. Count box number as five words.

Display ads . . . $18.00 per column inch, minimum of one inch. Ads over the minimum are accepted only in multiples of one half inch.

For prompt results, send your classified ads to Farm Chemicals, 317 N. Broad St., Philadelphia 7, Pa.

Closing date: 10th of preceding month

FOR SALE: Baird Dryers, Model D-700, 4 x 30; Rotary Steam Tube Dryers, 4′ x 30′, 6′ x 25′, 6′ x 45′; Heil Dryers, 8 x 24, 8 x 16 (Portable), also hammer mills, mixers, etc. Perry Equipment Corp., 1430 N. 6th St., Phila. 22, Pa.

FOR SALE: Dewatering Presses: Louisville 8-Roll 36″, Davenport #2A, 1A. Mikro Pulverizer #2DH. Ribbon Mixer: 336 cu. ft. Steel Tanks: 400 gal. to 9,500 gal. Perry Equipment Corp., 1430 N. 6th St., Phila. 22, Pa.

FOR SALE: Fertilizer equipment and tornado damaged fertilizer plant at Fargo, N. D. Building has vertical columns, foundation, bin cribbing, warehouse dock. Equipment consists of drying, cooling and pelletizing drums, fans, dust collectors, Stedman mixer, I&C bagger, hopper system and scales, flowrators, bucket elevators. Keystone 150 hp boiler, two Tyler screens, one Link Belt vibrating screen, two payloaders, Yale fork lift and pallets. Acid and fuel oil tanks, several miscellaneous conveyors, 50 totally enclosed motors up to 40 hp. Contact Ted B. Schultz, Asst. General Manager, Peavey Elevators, 809 Grain Exchange, Minneapolis 15, Minn.

FARM CHEMICALS HANDBOOK

Standard Reference Guide for the Farm Chemicals Industry
Write today to

FARM CHEMICALS HANDBOOK
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MONARCH SPRAYS

This is our Fig. 645 Nozzle. Used for Scrubbing Acid Phosphate Gases. Made for "full" or "hollow" cone in brass and "Everdur." We also make "Non-Clog" Nozzles in Brass and Steel, and

Stoneware Chamber Sprays

now used by nearly all chamber spray sulphuric acid plants.

CATALOG I

MONARCH MFG. WORKS, INC.
2501 East Ontario Street, Philadelphia 34, Pa.

CALIFORNIA FERTILIZER ASSN. CONVENES IN SAN FRANCISCO

FIVE HUNDRED persons took part in the 34th annual convention of the California Fertilizer Association, held at the St. Francis Hotel, San Francisco, November 3, 4 and 5. CFA members elected William G. Hewitt of Berkeley their president for the coming year. He succeeds Jack Baker of Los Angeles.

Theme for the meeting was "Our Partnership with Agriculture."

True D. Morse, Under Secretary of Agriculture, said that "the productivity per farm worker has doubled in the past 15 years. This is more rapid than for industry. Sound financial management by farmers is shown in the fact that the debt ratio to assets is kept low—only $1 of debt for each $11 in assets. Only about one farm in three has a mortgage."

Dr. Russell Coleman, executive vice president of the National Plant Food Institute, discussed "Agricultural Subsidy—A Partnership Affair." He said that technological advancements must continue to be applied quickly on the farm to help balance our knotty agricultural problems. "The application of technology by farmers has resulted in outstanding savings to the farmers and to the American public."

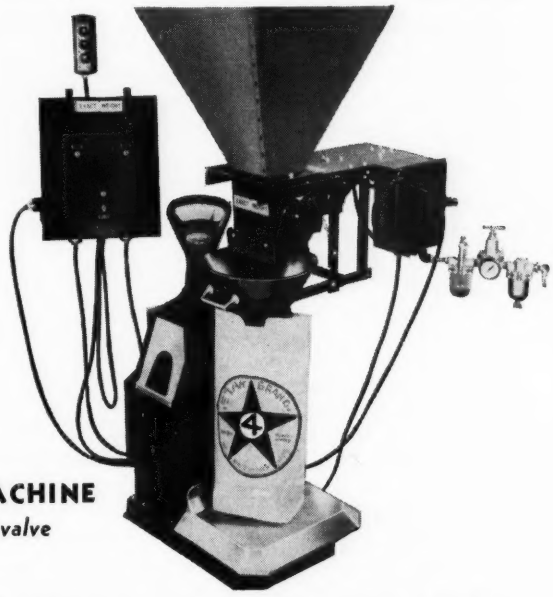
M. E. McCollam, chairman of the association's Soil Improvement Committee, told of the 30 years of existence of his committee and of its endeavors to improve soil technology and agricultural practices.

The expanded program of the National Plant Food Institute on a regional basis was welcomed by Sidney H. Bierly, general manager of CFA, in his report.

A panel discussed "Our Partnership with Agriculture" during the afternoon session. Moderated by Dr. Daniel G. Aldrich, Jr., chairman of the Dept. of Soils and Plant Nutrition, University of California, it consisted of Dr. George B. Alcorn, director of agricultural extension, University of California, Berkeley; J. Earl Coke, vice president, Bank of America; John Martin, Jr., Martin Produce Co., Inc.; and Lowell W. Berry, president, The Best Fertilizers Co.

Officers elected at the convention to serve with President Hewitt were Howard H. Hawkins, Glendora, vice president; M. M. Stockman, San Francisco, treasurer, and Fred R. Bryant, Shafter, secretary. Sidney H. Bierly was re-elected general manager.

Elected to the Board of Directors for three year terms were Fred R. Bryant, Shafter; Frank Easton, Fresno; D. W. Galbraith, Woodland; and John N. Williams, Chula Vista. R. L. Luckhardt was honored as the industry "Man-of-the-Year." Dr. Ray E. Neidig, Rio Del Mar, and James M. Quinn, Los Angeles, were elected to Honorary membership. ▲



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BETTER QUALITY CONTROL . . . BETTER COST CONTROL

by Dr. Melvin Nord

PATENT REVIEWS

FERTILIZERS

U. S. 2,800,396, issued July 23, 1957 to Marvin J. Udy and assigned to Strategic-Udy Metallurgical & Chemical Processes Ltd. relates to the recovery of phosphorus from phosphate rock.

The process involves preheating the phosphate rock, and feeding the preheated charge directly into the hot zone of a molten slag bath maintained at a high temperature in an electric furnace.

U. S. 2,802,728, issued August 13, 1957 to Lloyd L. Jaquier, Jr., assigned to Phillips Petroleum Co., relates to a process for the production of superphosphate.

The curing time is reduced in the process for producing superphosphate by sulfuric acid acidulation of phosphate rock, by forming a mixture of a wetting agent and the sulfuric acid.

PESTICIDES

U. S. 2,800,424, issued July 23, 1957 to Hamilton L. J. Marshall, assigned to International X-ray, Inc., provides a systemic insecticide which, when introduced into the soil close to vegetation, will be made available slowly for being taken up by the vegetation, and which will not injure the vegetation.

The systemic insecticide, which also has some fertilizing qualities and may be mixed with fertilizers, consists of a water soluble inorganic cyanide-containing compound, a buffer, a compound readily subjected to acid hydrolysis, and a nitrogen-containing compound.

U. S. 2,801,950, issued August 6, 1957 to Kenneth B. Tate and assigned to Charles Pfizer & Co., Inc., discloses an agricultural composition for combating plant pathogens, consisting of a streptomycin type antibiotic and a tetracycline type antibiotic. These antibiotic mixtures are exceedingly effective in inhibiting the growth of primary and secondary infective organisms and in reducing the tendency for the development of resistant strains, particularly organisms of the Xanthamonas genera. The antibiotics penetrate the plant tissue and protect it against internal invasion by the bacteria.

U. S. 2,802,012, issued August 6, 1957 to Jerome G. Kuderna and assigned to Shell Development Co., discloses certain new nitrogen-heterocyclic compound insecticides.

U. S. 2,802,768, issued August 13, 1957 to Lloyd J. Meuli and assigned to The Dow Chemical Co., describes a method of treating a fungus-infected soil with a haloketone. This protects the crops against attack by soil-dwelling fungi and improves the emergence and growth of seedlings as well as the crop harvest.

U. S. 2,802,769, issued August 13, 1957 to Frederick G. Van Stryk, and Marshall Kulka, assigned to United States Rubber Co., discloses the use, as insecticides, of chlorophenyl-beta-thiocyanoethylsulfides and chlorobenzyl-beta-thiocyanoethylsulfides.

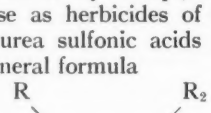
U. S. 2,802,770, issued August 13, 1957 to Carl M. Monroe, William E. Rader, and William J. Raab, assigned to Shell Development Co., discloses the use, as a fungicide, of 2-alkyl-3,4,5,6-tetrahydropyrimidine nitrate and related compounds. The range between the minimum effective fungitoxic rate of application and the maximum non-phytotoxic rate of application is very large.

U. S. 2,795,525, issued June 11, 1957 to Roy E. Stansbury and Lyle D. Goodhue, assigned to Phillips Petroleum Co., discloses the use of alkyl substituted sulfenyl and thiosulfenyl xanthates for eradicating nematodes. The general formula for these compounds is

where R is alkyl (C1-2), R′ is alkyl (C1-10), and n is 2 or 3.

HERBICIDES

U. S. 2,801,911, issued August 6, 1957 to Everett E. Gilbert, Julian A. Otto, and Silvio A. Pellerano, assigned to Allied Chemical & Dye Corp., discloses the use as herbicides of substituted-urea sulfonic acids having the general formula



where R is a cyclic hydrocarbon radical (or its substituted product), R_2 is an aliphatic hydrocarbon radical, X is oxygen or sulphur, and R_1 and R_3 are hydrogen or an aliphatic hydrocarbon radical.

CONTROL OF BORON POISONING IN PLANTS

U. S. 2,794,299, issued June 4, 1957 to Seymour Thomas, Jr., assigned to Crown Zellerbach Corp., discloses a composition for inhibiting boron poisoning in plants. Such poisoning may for example be caused by the presence of excessive amounts of boron in fertilizers such as potash salts, or in irrigation water. The use of lime to reduce boron poisoning is disadvantageous in a number of respects, including affecting the availability of other essential nutrient elements, and upsetting the soil structure and *p*H.

Boron poisoning can now be prevented, without the use of lime and its corresponding disadvantages, by the use of ammonium-base waste sulfite liquor. The dried solids content of the liquor may, for example, be added to irrigation water. About 1–50 parts by weight of sulfite waste liquor solids to 1 part of boron inhibits the phytotoxic action of the boron. ▲

NEW FARM POLICY *(from page 41)*

"Even more discouraging are the implications of the latest analyses of farm price specialists. They indicate to me that in spite of efforts to expand markets and adjust production, in the next year or two if price supports are lowered to levels that would permit all current production to move through commercial markets, net farm income, and returns per hour of farm labor, will decline 20 to 25 per cent from current levels.

"Some farm organizations and farm leaders, perhaps believing the decline would be less, favor such a reduction in farm price support levels and related activities. Other groups, perhaps believing the decline would be even greater, resist any changes in existing price support policies until more satisfactory intermediate programs or compromises can be achieved."

While the Agriculture Department thus far has not put out an analysis of Secretary Benson's proposals, it has taken the time to publish a study on the probable effects of a plan which is *opposed* by the Administration. This is the so-called compensatory payment program, or "Brannan Plan," the outlines of which were proposed in 1949 by former Secretary Brannan and generally down-rated in the early 1950's.

Even though Administration leaders have denounced this type of operation, they pushed through Congress that precise kind of program for wool. Under compensatory payments, commodities would be permitted to seek their own price levels in the open market. The government then would pay the farmer the difference between that level and 90 per cent of parity.

While the new Department study was requested by Congress, it is based on the assumption that all major crops would come under the plan, even some which are not now supported. As a practical matter, the conclusion over-states the case, in view of the fact that present-day advocates in Congress say they would limit the program to a very few commodities, such as cotton.

The annual cost to the government of a compensatory payment program for 26 major commodities in unlimited production would come to about $10.7 billion, says the Department. If payments were made on the 1952–56 production average, the payments would total about $7¼ billion. These projections compare with expenditures under the present support program of about $2 billion. By implication, the Department opposes this approach because of the possible increase in government investment.

Since industry's best interest lies in a healthy, strong, free-spending agriculture, it may be fair to conclude that perhaps a combination of these two extreme programs may be the most profitable—stressing all the while a progressive reduction in farm reliance on the government. ▲

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Pressure storage and corrosion-resistant storage facilities are typical of the many types of tanks we build especially for the fertilizer industry. Take advantage of our 103 years of specialized knowledge and experience. Write for booklet, *Tanks and Equipment for the Plant Food Industry.*

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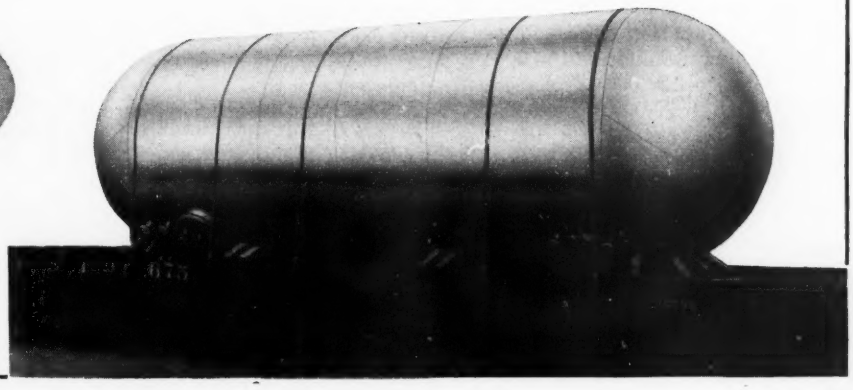

PEST REPORTS

Presented in cooperation with the Economic Insect Survey Section, Plant Pest Control Branch, Agricultural Research Service, USDA.

GRASSHOPPERS STILL ACTIVE IN OCTOBER

ALTHOUGH the principal grasshopper activity was over by early September, some trouble was still being experienced in October. In Nevada, *Schistocerca* grasshoppers were more numerous in the Moapa and Virgin Valleys of Clark county than they were in 1956. Margins of many wheat fields in northeastern Colorado and the Oklahoma Panhandle were seriously damaged in October. Injury was common throughout the eastern Colorado area. Damage was also reported occurring to newly emerged wheat along field margins in areas of Cloud, Clay and Ottawa counties, Kansas. Grasshoppers were reported on grasses and garden crops in Alabama. In Louisiana, several species of longhorn grasshoppers were severely damaging late rice in Acadia, Jefferson Davis, Cameron and Calcasieu parishes. The damaging of rice in the "boot" stage resulted in deformed heads.

Over 1,700,000 acres of rangeland were treated in the cooperative program for grasshopper control during the 1957 season. The largest acreage, 651,000, was treated in Montana followed by Wyoming where about 443,000 were treated. Acreage treated in other states was as follows: California 168,000; New Mexico 122,000; Nebraska 100,000; Utah 70,000; North Dakota 63,000; Texas 49,000; Idaho 34,000; Nevada 21,000; Colorado 18,000 and South Dakota 500 acres.

Among other cereal and forage insects which were active in late October was the fall armyworm. This insect was active on hay crops in Virginia, heavy on sorghums locally in Delaware and infesting wheat and rye locally in that state. In Kansas, considerable damage was caused to wheat in Mitchell and Osborne counties. Some early planted fields required reseeding. Sorghum and corn were infested in south central Nebraska counties with 90 to 95 per cent of the corn in the area having as high as eight armyworms per plant.

The spotted alfalfa aphid was on the increase in several states during October. There was a slight increase in spotted areas of New Mexico and some growers applied controls. Increases were noted in the Arkansas Valley of Colorado and in local areas of Oklahoma slight increases were reported. Buildups also occurred in old stands of alfalfa in Pinal county, Arizona, and controls were applied on limited acreage. The pest was prevalent in early November in many alfalfa fields in north central Kansas.

The first report of the season for damage from greenbugs came from Alabama where light damage was caused to oat fields. Pea aphids were on the increase on alfalfa in Arkansas. In Delaware, this pest was common on alfalfa in localized areas of each county of the state.

Among truck crop insects, cabbage loopers were perhaps the most active during October. In southern California, these insects were numerous with cotton, lettuce, beans and cole crops being damaged. There was considerable defoliation of beans in Orange county and heavy infestations were recorded on cabbage and cauliflower. New Mexico reported light to medium populations of cabbage loopers on lettuce in Dona Ana, Eddy and Bernallilo counties. The majority of growers were controlling the pest with insecticides.

The insect continued serious on crucifers in the eastern area of Virginia. Some difficulty in control was being experienced with the insecticide used.

Damage continued to cucurbits and crucifers in some areas of New Castle and Kent counties, Delaware. The corn earworm was damaging lima bean pods in Orange county, California, squash and peppers locally in Delaware and beans in the Norfolk, Virginia, area.

SPITTLEBUG SURVEY IN OHIO AND ILL.

A survey of adult meadow spittlebug infestations was made during September in Ohio. Infestation levels found were the highest ever recorded in the six years that these surveys have been made. Every region sampled, except the old lake bed region (the west edge of Lake Erie) had many more adults than are necessary to produce an economic infestation next year. The lake bed region has never recorded an economic population but this year approached that level; 0.83 adults per sweep. One adult per sweep is regarded as an economic level. Barring extremely unusual dry conditions during the winter and early spring the problem could be the severest ever experienced in Ohio.

The spittlebug survey in Illinois showed a very severe infestation in Boone county. Severe infestations were found in most counties of the northern three tiers. Moderate infestations were recorded for the eastern central counties along the Indiana border. A limited number of counties in the northern part of the state recorded light populations with the remainder of the counties being non-economic. ▲

FEEDING AND FERTILIZER MATERIALS

(SINCE 1898)

●

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CUT COSTS for Packing BAGS

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AUGER-MATIC Bag Packer

Low Cost, portable AUGER-MATIC packs any material from powder to pellets in paper bags . . . shuts off automatically when desired weight is reached.

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AMMONIATES — FEED STUFFS — SULPHUR — POTASH
INDUSTRIAL AND AGRICULTURAL
CHEMICALS

Production — August, 1957

Compiled from Government Sources

Chemical	Unit	August 1957	August 1956	July 1957
Ammonia, synth. (anhydrous)	s. tons	294,507	242,584	*293,661
Ammonia byproduct liquor (NH_3 content)	s. tons	1,385	1,319	1,425
Ammonium nitrate, fert. grade (100% NH_4NO_3)	s. tons	190,413	139,635	161,363
Ammonium sulfate				
synthetic (technical)	s. tons	84,575	81,576	*80,717
by-product (incl. amm. thiocyanate)	s. tons	78,245	62,072	79,587
BHC (Hexachlorocyclohexane)	pounds	———	7,682,872	**3,412,943
Gamma content	pounds	———	1,322,010	**610,746
Calcium arsenate (commercial)	s. tons	313	1,171	1,890
Copper sulfate (gross)	s. tons	6,972	5,964	6,472
DDT	pounds	———	12,137,578	**10,484,918
2,4-D Acid	pounds	———	1,447,560	**2,907,720
esters and salts	pounds	———	625,659	**1,944,737
esters and salts (acid equiv.)	pounds	———	459,730	**1,626,006
Lead Arsenate (acid and basic)	s. tons	[1]	[1]	[1]
Phosphoric acid (50% H_3PO_4)	s. tons	353,015	263,647	331,608
Sulfur, native (Frasch)	l. tons	469,987	597,699	459,534
Recovered[2]	l. tons	46,705	42,500	45,311
Sulfuric acid, gross (100% H_2SO_4)	s. tons	1,301,256	1,181,809	1,285,869
Superphosphate (100% APA)	s. tons	170,620	143,456	162,974
Normal and enriched (100% APA)	s. tons	91,899	[3]86,841	73,656
Concentrated (100% APA)	s. tons	63,787	40,825	76,606
Other phos. fertilizers (incl. wet-base goods)	s. tons	14,934	[4]14,684	12,712
2,4,5-T Acid	pounds	———	253,758	**549,395
Urea	pounds	———	62,525,520	66,186,819

*Revised. **Partly estimated. [1]Withheld to avoid disclosing figures for individual establishments. [2]Recovered sulfur of a purity of 97 per cent or greater. [3]Excludes enriched superphosphate, quantities of which if added to normal superphosphate would account for less than 2 per cent of the total. [4]Excludes wet-base goods, quantities of which if added to other phosphatic fertilizers would account for less than 1 per cent of the total for items except stocks. Stocks of wet-base goods would account for less than 3 per cent.

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FERTILIZER MATERIALS MARKET

New York

November 20, 1957

Sulfate of Ammonia. With some new large inquiries in the market for export to the Far East, producers were hopeful this would solve any surplus problems until the Spring fertilizer season gets under way. No price changes were noted.

Ammonium Nitrate. One large producer recently announced a reduction in the price of this material as of January 1. They had intended to raise the price $4 per ton effective January 1 but cut it back to an increase of $2 per ton because of competitive situations.

Urea. Production has kept pace with demand in the domestic market but sizeable quantities of imported urea continue to arrive at various ports at competitive prices.

Nitrogenous Tankage. Some producers still report a sold up condition for the balance of the year and the market continues to be priced at $3 to $4 per unit of ammonia ($3.64 to $4.86 per unit N) f.o.b. various production points.

Castor Pomace. The price of this material continues at $45.50 per ton, f.o.b. production points, and recently a considerable quantity of imported castor pomace arrived at Southern ports but this material was said to have been sold before arrival.

Organics. Most organic fertilizer materials were on the quiet side as most buyers preferred to await a clearer picture of just how much fertilizer they would be able to sell during the coming Spring season. Blood sold at $5.25 per unit of ammonia ($6.38 per unit N) f.o.b. Eastern points and tankage sold at $4.75 per unit of ammonia ($5.77 per unit N). Soybean meal fluctuated in a narrow range because of the large potential amount available and last sales were made on the basis of $45 per ton in bulk, f.o.b. Decatur, Ill. Linseed meal showed periods of both weakness and firmness with demand negligible. Cottonseed meal was on the quiet side as demand eased from the feed trade.

Fish Meal. Most fishing operations in Northern waters have ended and the result was a fair catch of fish for the season. Demand, however, from the feed trade is slow with buyers only buying their supplies as needed. Last sales were made on the basis of $132 to $134 per ton, f.o.b. fish factories for ground 60 per cent fish meal.

Bone Meal. The market is acting well for this material with last sales on the basis of $62.50 per ton, f.o.b. production points with some imported bone flour for feed purposes selling at a slightly higher price. Demand is expected to pick up as the shipping season approaches.

Hoof Meal. Demand for hoof meal at present is limited and the market is quoted nominally at $5.25 per unit of ammonia ($6.38 per unit N) Chicago, Ill.

Superphosphate. Buyers are taking deliveries on contracts and producers have a good stock on hand. Triple superphosphate is moving fairly well as the trend continues to high analysis fertilizers.

Potash. Shipments are being made against existing contracts with no price changes noted. Very little imported material has come in this season.

Philadelphia

November 20, 1957

Market in raw materials is seasonally quiet and not much improvement expected until spring mixing gets under way. Stocks of material are reported quite heavy.

Sulfate of Ammonia. Supply remains plentiful. There is some little buying by mixers, with no price changes indicated. Coke oven grade is still listed at $32 per ton.

Ammonium Nitrate. In common with the other materials there is no significant activity, and in one area the recently proposed price rise of $4 per ton, over the present $68 per ton, will be cut to $2 to cover the period January/June 1958. This means $70 per ton. The tonnage on hand is substantial.

Nitrate of Soda. Conditions remain as previously reported, with sufficient material on hand to meet all requirements.

Urea. This continues to be quoted at $110 per ton for the agricultural grade.

Blood-Tankage-Bone. The market in these by-products is weaker and present quotations are—for blood in New York area, $5 per unit ammonia ($6.08 per unit N), and $5.75 ($6.99 per unit N) Chicago area. For tankage the prices are $4.75 per unit ammonia ($5.77 per unit N), New York and $5.50 ($6.68 per unit N) Chicago. Bone meal continues to be listed at $62.50 per ton.

Castor Pomace. This is offered in limited quantities at $45.50 per ton.

Fish Scrap. The market is exceedingly quiet, with scrap listed at $128 per ton, and $132 per ton for menhaden meal.

Superphosphate. Some little interest is shown by mixers, but the market on the whole is quiet. Inventories are reported large. There is some foreign demand for Triple grade.

Potash. Market is very dull with plenty of material on hand. Muriate remains listed at 35½ cents to 37 cents per unit K_2O.

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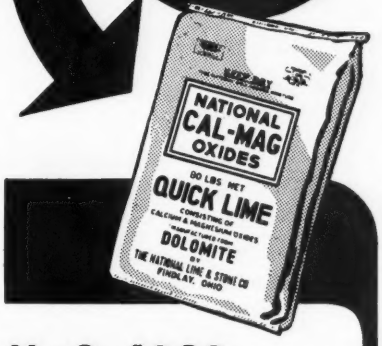

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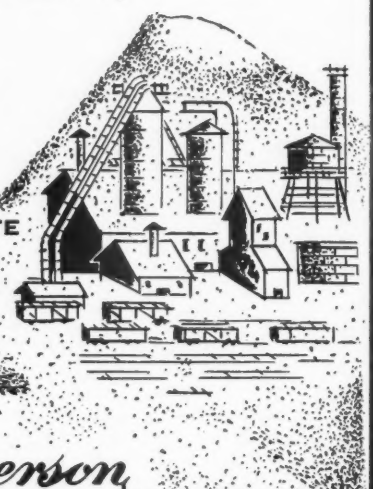

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AMMONIUM SULFATE
See Sulfate of Ammonia

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Bradley & Baker, N. Y. C.
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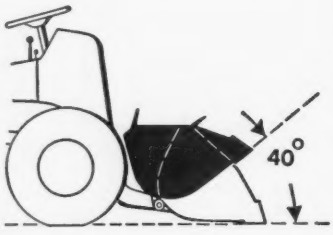

Magee Co-op, a chemical fertilizer manufacturer at Magee, Miss. have been using "PAYLOADER" tractor-shovels for fifteen years to unload rail cars of raw materials and to move fertilizer for bagging and unloading operations. They recently added a new-style model HA "PAYLOADER" to their fleet, and Mr. O. M. Ainsworth, the Plant Superintendent is pleased with its performance as he reports:

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